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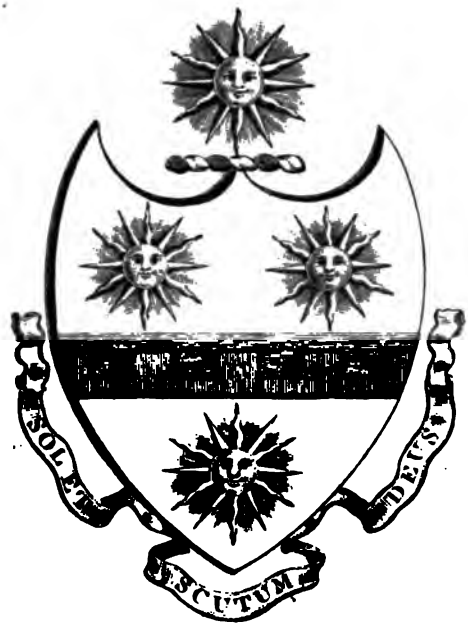

JOHN PEARSON

Jo. a. 9.

PHILOSOPHICAL

AND

LITERARY

ESSAYS.

PHILOSOPHICAL

AND

LITERARY

ESSAYS.

BY

DR GREGORY, OF *EDINBURGH.*

VOL. II.

Nam Sophia ars illa eſt, quæ fallere ſuaviter horas
Admonet, atque orci non timuiſſe minas.
PSEUDON: apud PITCAIRN.

EDINBURGH:
SOLD BY T. CADELL, LONDON,
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MDCCXCII.

OTHER CATHOLIC

SECT. VIII.

Further inſtances of the truth of the three Canons, in Mechanical Philoſophy, and in Chemiſtry: and of ſtriking analogy to them in Vegetation, and in Senſation, and Belief; in which occurrences or operations, though there be a different relation between the event obſerved and the principle of Change, and in ſome of them a different principle of Change from what there is in caſes of Cauſe and Effect in inanimate matter; yet there is either no optional or diſcretionary power, or but very little of it, in the ſubject, with reſpect to the Change that takes place.

ALL the general inferences expreſſed by the preceding *formulæ* $X \equiv A$, $X + Y \equiv A + B$, $X - Y \equiv A - B$, $X \curlywedge Y \equiv A \curlywedge B$, are found experimentally true as matters of fact in numberleſs inſtances of cauſe and effect in phyſics. We know not of any exception to them in phyſical ſcience; and have therefore every reaſon which the nature of the thing admits of

to believe, that they are univerſally true with reſpect to phyſical cauſes and effects. Hence we muſt infer, that the principles from which they are deduced as neceſſary conſequences, to wit, the incapacity of body to change its own condition, and the conſtant conjunction of cauſe and effect, are juſt principles or laws of Nature.

This point it may be of ſome conſequence to illuſtrate more fully: for it is of much importance in an attempt to inveſtigate the nature of the relation of cauſe and effect in phyſics; though it is by no means eſſential to the immediate object which I have in view in this ſection. For at preſent my object is not to prove, that ſuch *is* the nature of body, and that ſuch *is* the relation of cauſe and effect, but that ſuch is *not* the relation of motive and action; in order that I may be enabled to reaſon by neceſſary conſequences to ſome further concluſions reſpecting this latter relation, and the nature of mind, or of living perſons, when it is ſhewn, that the conjunction of motive and action is but occaſional and ſeparable.

And

And I ſhall endeavour further to illuſtrate the ſame principle, and its obvious neceſſary inferences, by the nearly correſponding reſult of ſimilar combinations of the principles of change in certain operations of mind, which are either wholly or partly involuntary, ſuch as ſenſation and belief.

For this purpoſe, I ſhall give ſome inſtances of the truth of the neceſſary inferences already ſtated, and conſequently of the truth of the two principles aſſumed, in three different branches of phyſical ſcience, mechanical philoſophy, chemiſtry, and phyſiology; each of which is in ſome meaſure regulated by certain laws peculiar to itſelf, while all ſeem to be ſubject to thoſe two more general laws.

Perhaps it will be thought needleſs, or little better than begging the queſtion, to offer inſtances of the truth of concluſions deduced from the principle of the inactivity of body, and that of the conſtant conjunction of cauſe and effect, from the phænomena of mechanical philoſophy, as every perſon in the leaſt acquainted with

this branch of ſcience knows, that in it there is not even a ſuſpicion, among men of competent judgement and knowledge, of any exception to either of thoſe two principles. And I believe ſuch a ſuppoſition would at once be pronouneed, not merely falſe, but abſurd, even by the vulgar.

Nevertheleſs, as mechanical philoſophy affords many of the beſt underſtood and moſt diſtinct and obvious examples of the truth of the inferences and of the principles in queſtion, I ſhall juſt mention, but without offering any commentary in proof of them, which I am ſure would be needleſs, that the well-known phænomena of the motions of the comets and planets, and the irregularities of theſe motions from the mutual influence of the moving bodies on one another, and the tides from the tendency of the ocean to the ſun and moon, and the inclination of a pendulum towards a mountain, and the curvilinear paths of bodies projected obliquely near the ſurface of the earth, and the retardation, and at laſt the ceaſing, of the motion

tion of a body projected directly upwards, and the acceleration of the motion of a heavy body, when falling unreſiſted, or little reſiſted, and the retardation or ceaſing of motion from the reſiſtence of the air, or from friction of any kind, plainly ſhew, that no difference of the kind, or of the direction of the cauſes applied, and that no diſproportion of the quantity of theſe cauſes, ever ſeparates, even in the ſmalleſt degree, or for a ſingle moment, a cauſe from its effect. Nor do any of theſe phænomena afford the ſmalleſt proof or preſumption, that a body can ever begin, or vary, or prevent, or ſtop, its own motion.

Chemiſtry affords innumerable inſtances of the truth of the ſame general inferences, and conſequently of the principles; and we uniformly rely upon them in chemiſtry, as well as in mechanics. It would be needleſs to enumerate inſtances of the effects of heat ſingly applied in producing expanſion, fuſion, or evaporation; of acids and alkalis on the blue vegetable tinctures, of various *menſtrua* on ſubſtances which diſſolve in them; of the concurrent effects

effects of heat and *menſtrua* in producing ſolution in many caſes; of heat and cold, of acids and alkalis, oppoſing one another, and preventing or undoing each other's effects, either wholly or partly, according to their ſeveral proportions in different caſes. But it may be worth while to point out, that the ſame general principles afford to men of real philoſophic genius, and extenſive chemical knowledge, the means of explaining ſome of the moſt important phænomena in natural ſcience; juſt as NEWTON's firſt happy corollary from the laws of motion, enabled him to make ſuch wonderful progreſs in the theory of aſtronomy, and in other branches of mechanical philoſophy.

It has been ſhewn by an ingenious chemiſt *, that the complete ſolution and permanent ſuſpenſion of water in air, depends partly on the effect of the air on the water, partly on the effect of heat; and

* Dr HUTTON of Edinburgh, in an Eſſay read before the Royal Society of Edinburgh in 1784.

that

that the effect of heat in this way is greater than in proportion to the increaſe of temperature as meaſured by the thermometer. Hence he very juſtly infers, that when two portions of air of different degrees of heat, and both of them ſaturated with water, are mixed together, the whole quantity of water cannot be retained in a ſtate of ſolution; and that part of it muſt immediately precipitate. This is found experimentally true as a matter of fact, and is the baſis of a ſatisfactory theory of the formation of rain and ſnow, &c. and, in general, of the condenſation of vapour in the atmoſphere.

The ſame author, in his obſervations and reaſonings * concerning the formation of the various *ſtrata* which compoſe a great part of the ſurface of this globe, and concerning the effects of heat on thoſe *ſtrata*, very properly pointed out, that we muſt not ſuppoſe the effects of heat on the ſubſtances which compoſe ſuch *ſtrata* to

* Read before the R. S. E. in 1785.

have

have been preciſely the ſame, along with the vaſt preſſure which muſt have been applied at the ſame time in the bowels of the earth, and without the admiſſion of air, that they would have been, if air had been freely admitted, and little or no preſſure had been applied. Such remarks and reaſonings I conceive to be highly judicious and important, and ſtrictly philoſophical; not merely on the faith of the analogy of many familiar inſtances of ſolution with or without heat, and of fuſion or calcination, or reſuſcitation, according to the other circumſtances or cauſes applied along with heat; but likewiſe as reſults to be expected *a priori*, as being neceſſary conſequences of the acknowledged inactivity of matter, and the ſuppoſed conſtant conjunction of cauſe and effect. We cannot indeed, for reaſons which it is unneceſſary here to conſider, in every caſe foretell what particular effect will be the conſequence of a certain combination of cauſes. In ſome caſes, however, we can do this; as in mechanical philoſophy. But in all ſuch caſes of the combination of cauſes, we can foretell, that the effect will be different from

from that of either of the cauſes applied ſingly. And the ſame may be ſaid with reſpect to the effects of the exact concurrence or the direct oppoſition of different cauſes.

The phyſiology of vegetables affords ſome familiar and unqueſtionable inſtances of the ſame general and important truths. But before mentioning any of theſe, it is proper to premiſe, that, independently of any influence or operation of what we commonly call *Mind*, there is, in every caſe where either animal or vegetable life is concerned, a different relation between the cauſe and the effect, and ſeemingly depending upon the concurrence or influence of ſome further principle of change in the ſubject, than what ſubſiſts in inanimate matter, or in the cauſes and effects that are the objects of mechanical and chemical philoſophy. And where-ever the action or operation of *mind* is concerned, the difference of the relations in queſtion becomes ſtill greater; but ſtill there is much analogy between them; and I be-

lieve the terms *Cauſe* and *Effect* are almoſt indiſcriminately applied to both.

Thus, light, and heat, and air, and water, and earth, and perhaps many other principles, blended with theſe, or unknown to us, are regarded as cauſes of vegetation; not indeed purely and completely, but in concurrence with the principle of vegetable life, without which, in a ſeed or in a plant, vegetation will neither begin nor continue, though all the other cauſes ſhould concur in the utmoſt perfection. Even when this principle of life is preſent, the other cauſes taken ſingly are not conſtantly conjoined with effect in point of vegetation. Any one of them may be applied in vain; nay more than one of them; as light, air, and earth without heat, or all of theſe without moiſture. Yet, where the circumſtances are ſuch that vegetation does go on, the effect of any of the external cauſes in contributing to the general reſult, is ſufficiently obvious. The different growth of the ſame kind of plant, in a very poor, and in a richly manured ſoil, in a very dry or in a wet,

wet, in a hot or in a cold ſeaſon, is well known to every peaſant The conſequences of with-holding light, or a due ſupply of air, from a growing plant, have been aſcertained by experiments. From want of light, the plant loſes, or never acquires, its proper colour, ſmell, and taſte; and from want of either light or air, it becomes feeble and ſickly; unlike the flower *Quem mulcent aurę, firmat ſol, educat imber.* In one well-known inſtance, the leaves of a plant which are fibrous when they grow under water, become broad when they are expoſed to the air.

We have innumerable correſponding inſtances in ſenſation. I acknowledge ſenſation to be an act of the mind, and in part even a voluntary act, in ſo far at leaſt as it depends on attention, which to a certain degree is voluntary. But then it muſt be obſerved, that ſenſation is, in part at leaſt, an involuntary act: we can neither have it when we pleaſe, nor avoid having it when the proper cauſes of it are applied. And it muſt be admitted, that even in ſenſation there is a certain chain of cauſes

and effects; that the change of ſtate occurring in an organ of ſenſe, in conſequence of an impreſſion made on it, to which change, in ordinary and favourable circumſtances, our ſenſations very exactly correſpond, may fairly be regarded as the effect of a certain cauſe, or combination of cauſes, applied. Therefore, while I acknowledge the important difference, I hope I may fairly make uſe of theſe ſtrong circumſtances of analogy, between ſenſation and effect in inanimate matter: the incapacity of *feeling* (I uſe here the term in its moſt general acceptation) at pleaſure, correſponds to *inertia*; the inſeparable connection, in ordinary caſes, between the impreſſions made on the organs of ſenſe and the ſenſations ariſing from them, correſponds ſtill more nearly to the conſtant conjunction of cauſe and effect in inanimate matter. And from theſe circumſtances of analogy, notwithſtanding the differences, reſult the ſame general inferences as in pure phyſics, reſpecting the ſingle application, the exact concurrence, the direct oppoſition, and the combination of impreſſions or cauſes, of ſenſations

or

or effects. We ſhall here conſider only the laſt of them, the caſe of combination of impreſſions, as being the moſt curious and ſatisfactory of them all.

It is well known, that in numberleſs inſtances, where various impreſſions, naturally producing ſenſations of the ſame kind, are made on an organ of ſenſe, either exactly at once, or in very quick ſucceſſion, ſo that the former ſhall not have ceaſed when the latter have begun, inſtead of the ſimultaneous or ſucceſſive ſeparate ſenſations, correſponding to every ſingle impreſſion, we experience a ſenſation different from what we ſhould have had from any one of the ſame impreſſions, if it had been made ſingly on the organ of ſenſe.

Thus, the taſte of moſt kinds of food, and of liquors, which we commonly uſe, is the reſult of the combination of two or more impreſſions, different from one another, and each of them of ſuch a nature, that if it had been made ſingly, we ſhould have experienced a ſenſation very different

different from what reſults from the combination of them. The ſame may be ſaid with reſpect to ſmells; or with reſpect to ſounds, as in muſic.

But we have the moſt complete and beautiful illuſtration of the principles in queſtion, from the ſenſe of ſight, and in the caſe of colours; where the difference between the ſenſation conſequent upon any one of the impreſſions when made ſingly, and that reſulting from a combination of different impreſſions, is peculiarly ſtriking. The mixture, either by ſimultaneous combination, or by very quick ſucceſſion, of impreſſions on the ſame points of the *retinæ*, which ſingly would have produced in us the perception of blue and of yellow, gives us the perception neither of blue nor of yellow, but of green. It may be obſerved too, that this reſult takes place even when thoſe different impreſſions are made ſingly, one on the right eye, the other on the left eye, provided they be made at the ſame time, and on correſponding points of the two *retinæ*; for inſtance, on the centre of each: for

in

in this caſe both colours are ſeen in the ſame direction or viſible place. And the ſhade or kind of green, or its approximation to blue or to yellow, correſponds to the proportion of the two impreſſions which would have been attended, if made ſingly, or on points of the *retinæ* that did not correſpond, with the diſtinct and ſeparate perception of theſe two colours. The ſame may be ſaid of the combination of all other colours in various proportions with one another; or of the mixture of white, or of black, (which laſt we regard only as the oppoſite of all colour, or the privation of colour), with different colours, which they always render lighter or darker. And it is well known, that the combination of ſuch impreſſions as ſingly would have given us the perception of all the rainbow colours, in certain proportions, gives us the perception of none of them, but of pure white.

It may be proper here to mention, though it is plainly a circumſtance that can require neither proof nor commentary, that where the effects reſulting from

ſeveral

ſeveral different cauſes applied at once are ſo incongruous in their nature or kind, that they cannot be combined ſo as to form what is called a *Tertium quid*, ſtill the conjunction of cauſe and effect appears to be conſtant; for each cauſe is followed ſeparately by its proper effect.

Thus, when a red-hot ball is projected obliquely to the horizon from a canon, by the combination of the projectile force, and of gravity, and of the reſiſtance of the air, it deſcribes a certain irregular curve. The reſult in this caſe is an effect different from what would have taken place from any one or two of thoſe cauſes without the reſt. The ball at the ſame time becomes gradually cooler, and harder, and denſer, and leſs luminous, by the diffuſion or diſſipation of its heat. Theſe effects do not admit of combination with the others, ſo as to modify the path of the ball; but yet they are as conſtantly conjoined with their reſpective cauſes, as the others are with theirs; and the contrary opinion, if not abſurd, would at leaſt be very fooliſh.

In

In like manner, where ſenſation is concerned, if the ſenſations, reſulting from the different impreſſions made on our organs of ſenſe, be of ſuch different kinds as not to admit of any compoſition or mutual modification, each takes place ſingly; and we can, at leaſt in moſt caſes, attend to any one of them by itſelf, or perhaps to ſeveral of them together. But this laſt circumſtance is a matter of diſpute among philoſophers. Thus, when a perſon graſps a ball of iron in his hand, and at the ſame time looks at it, he perceives, by means of different impreſſions, either at once, or in any order in which he may chuſe to attend to them, that it is extended, figured, coloured, ſolid, hard, heavy, hot or cold, rough or ſmooth: whence it appears plainly, that theſe ſeveral ſenſations, in ſo far at leaſt as they are *effects*, and not *actions* of ours depending on our attention, and conſequently to a certain degree on our will, are conſtantly conjoined with their reſpective cauſes.

We have another good inſtance of analogy to the reſult of the compoſition, op-

poſition, and combination of phyſical cauſes, in the caſe of that ſtate or act of the mind which we call *Belief*. This ſtate of the mind correſponds to, or, as we commonly expreſs it, is determined or regulated by, evidence of various kinds. Like ſenſation, it is almoſt or perfectly an involuntary act of the mind. We can neither believe nor diſbelieve as we pleaſe, but according to the evidence which we have. The utmoſt we can do by any voluntary effort towards regulating our belief is to liſten or attend, or avoid and refuſe to liſten or attend, to the evidence in any particular caſe; but when we do attend, our belief follows of courſe according to the evidence.

Evidence, however, is not, ſtrictly ſpeaking, conſtantly conjoined with belief, as phyſical cauſes ſeem to be with their effects: for different kinds of evidence are competent to different ſubjects of belief, and have no weight or influence in producing belief on other ſubjects, or in oppoſition to other kinds of evidence.

Thus,

Thus, the intuitive evidence of an axiom, and the diſtinct concluſive evidence of demonſtration, produce firm and perfect belief, not to be ſhaken, nor confirmed, nor any way modified, by the evidence of experiment, or of induction, or of ſenſation, or of teſtimony. As little can demonſtration be offered as evidence, in oppoſition to experiment, or ſenſation, or conſciouſneſs, with reſpect to any matter of fact.

Moreover, the belief or conviction which we have of the truth of an axiom, or of a theorem demonſtrated, admits of no degrees; nor can it be confirmed by any other axioms or demonſtrations.

We have no reaſon to think, that there ever can be any oppoſition of intuitive evidence; that is, any contradictory axioms. As little can there be contradictory demonſtrations by juſt inferences from genuine axioms. But if there were ſuch an apparent oppoſition of intuitive or of demonſtrative evidence, in conſequence of the undetected fallacy of certain princi-

ples raſhly admitted, or of the reaſoning employed, we have reaſon from analogy to think, that the ſeemingly equal and oppoſing evidences would completely deſtroy each other's influence, that no belief on either ſide could take place, and that we ſhould inevitably remain in uncertainty and doubt.

Such is the caſe with reſpect to oppoſing demonſtrations from principles arbitrarily aſſumed or eſtabliſhed; as, for example, expreſs laws, which either directly, or in their remote conſequences, may be inconſiſtent; or ſpecial compact among individuals, which, according to particular circumſtances, may lead by the moſt irrefragable reaſoning to inconſiſtent concluſions.

The well-known ancient ſtory of the double dilemma, or dilemma retorted, is a good inſtance of this reſult. *Euathlus* promiſed *Protagoras* a reward when he had taught him the art of pleading; and it was to be paid the firſt day that he gained any cauſe in the court. After a conſiderable

conſiderable time, *Protagoras* goes to law with *Euathlus*, for the reward; and uſes this dilemma: "Either the cauſe will go on my ſide or on yours: if it goes on my ſide, you muſt pay me according to the ſentence of the judge; if it goes on your ſide, you muſt pay me according to your bargain: therefore, whether the cauſe goes for me, or againſt me, you muſt pay me the reward." But *Euathlus* retorted the dilemma, thus: "Either I ſhall gain the cauſe or loſe it: if I gain it, then nothing will be due according to the ſentence of the judge; but if I loſe the cauſe, nothing will be due to you according to my bargain: therefore, whether I gain or loſe the cauſe, I will not pay you; for nothing will be due to you."

I think it is ſaid, that the court, unable to decide in favour of either party, ordered them both to appear in court again an hundred years afterwards, to receive judgement. This may be regarded as virtually a deciſion on one ſide; and, in point of equity, it may be thought on the wrong one; but it was at leaſt an acknowledgement

ment of the impoſſibility, which every perſon muſt perceive, of giving judgement in favour of either party, according to the expreſs terms of their compact, and the neceſſary inferences from them; or *believing* that the one party had a better right to exact than the other had to with-hold the ſtipulated reward.

We have reaſon to think, that in phyſics accurate experiment and ſtrict induction will never afford oppoſing or inconſiſtent evidence. But as our experiments are often inaccurate, and our induction raſh and imperfect, ſuch an apparent oppoſition frequently takes place, and doubt, inſtead of belief, is the reſult, at leaſt with thoſe who attend equally and impartially to the evidence on both ſides of a queſtion. This is the caſe at preſent with many candid and intelligent chemiſts with reſpect to the exiſtence of ſomething called *Phlogiſton*, and with reſpect to the compoſition or decompoſition of water, of metals, of different kinds of air, and of inflammable ſubſtances, in various proceſſes.

With

With reſpect to belief founded on the evidence of our ſenſes; it is a matter of much nicety, and little to the purpoſe of this argument, to diſtinguiſh accurately between direct ſenſation, or perception, and the quick, but ſometimes erroneous, inferences with reſpect to the objects around us, which we are accuſtomed to draw from our ſenſations. But taking the two together, as we generally do in common life, it muſt be evident, that we often have ſimple, ſometimes concurring, ſometimes oppoſing evidence from them; and this ſometimes clear and ſtrong, ſometimes obſcure and feeble. Correſponding to theſe varieties of the evidence, we experience varieties in the reſult with reſpect to belief, from the perſuaſion of the ſlighteſt probability, to the moſt irrefragable conviction, or inextricable doubt: As, for example, in the common occurrence of judging of the *genus* or *ſpecies*, or even recogniſing the individual by means of our ſenſes. As in the caſe of *Iſaac* when he was blind, and *Jacob*, inſtructed and diſguiſed by his mother, came to obtain his bleſſing: "The voice

"is

" is *Jacob's* voice; but the hands are the " hands of *Eſau*." In moſt caſes of belief from ſenſation, any apparent oppoſition of the evidence is ſoon removed, by repeated and careful examination of the objects and the ſenſations; but in many caſes of belief from what is called *circumſtantial evidence*, or even from direct teſtimony, we have not that reſource; and accordingly experience irreſiſtibly the various degrees and ſtates of probability, conviction, or doubt, according to the nature, the amount, the concurrence, the combination, or the oppoſition, of the evidence before us.

Thus, one or two circumſtances, perhaps trivial in themſelves, will make us think a certain point, for example the guilt of an accuſed perſon, probable in a certain degree. More concurring circumſtances will render that point more and more probable, till at laſt we cannot doubt of it, even though we have no direct evidence, either by ſenſation or teſtimony. And according to thoſe circumſtances we experience the belief of various particulars

lars relating to the principal point in queſtion; but if any circumſtances, in oppoſition to thoſe firſt obſerved and attended to, are diſcovered, then we fall into doubt, and can no longer believe.

This kind of oppoſition of evidence happens often where belief is to be regulated merely by human teſtimony, and where ſome advantage is to be gained by one or both parties by falſehood and perjury. Cuſtomhouſe-officers have obſerved, that ſmugglers have an uncommon latitude of conſcience in this reſpect; and ſmugglers are very apt to return the compliment. Certain it is, at leaſt, that in ſome trials relating to ſmuggling, ten, twenty, or more witneſſes, on one ſide, have ſworn in direct oppoſition to an equal number of witneſſes on the other, with reſpect to a plain matter of fact, ſuch as a ſhip being in a certain place, or within a certain diſtance of the ſhore, at a particular time; the truth of which fact they muſt all have known perfectly. Jurymen are aſtoniſhed, and even experienced lawyers and judges are ſometimes confounded, with ſuch con-

those concerned would in every respect correspond to it.

These various instances of belief I have considered with a degree of minuteness that may appear unnecessary; but it is of consequence to examine such cases accurately, in order to perceive more clearly the difference between the result in them and that in corresponding cases of motives and voluntary actions. The perfect correspondence of them, where the evidence is of the same kind and authority, to the *formulæ* stated in the beginning of this section; and the dependence of the result on the want of any optional or discretionary power in a person, with respect to belief, can neither require nor admit of proof.

SECT.

SECT. IX.

Inference from the doctrine of the Conſtant Conjunction of Motive and Action, which is demonſtrated as a neceſſary conſequence of it, and yet is notoriouſly falſe in point of fact.

ANY man of tolerable ingenuity, or even induſtry, who will take the trouble to ſearch for inſtances of the analogy and reſemblance between the relation of cauſe and effect and that of motive and action, will eaſily find many thouſands of caſes, which may be conſtrued into inſtances of the aſſumed principles with reſpect to the latter relation, and regarded as good illuſtrations of the neceſſary inferences which have been drawn from thoſe principles. But every man of obſervation and candour muſt know and acknowledge, that there are thouſands

thouſands of familiar inſtances in direct contradiction to thoſe inferences and principles, any one of which is ſufficient to prove them falſe: for as the inferences are all ſtrictly neceſſary, if the principles from which they are deduced be juſt, they muſt be univerſally true; and an exception to them is a refutation of one or other, or both, of the principles aſſumed.

And it is chiefly on this account that the principle of *inertia* of mind, and that of the conſtant conjunction of motive and action, are expreſſed ſeparately in this argument: for though the former is fully implied in the latter, this is not mutual; the *inertia* of mind may be conceived, even though the relation of motive and action ſhould be, not a conſtant, but an occaſional and ſeparable conjunction.

I ſhall conſider, ſucceſſively, inſtances of all the three caſes of the combination, oppoſition, and concurrence of phyſical cauſes, and of motives, reſpectively, in order to ſhew the difference between the ſeemingly

ſeemingly conſtant conjunction of cauſe and effect in phyſics, and the manifeſtly occaſional and ſeparable conjunction of motive and action.

See Diagram I.

If any cauſe be applied to a *body*, in conſequence of which it would move with a certain velocity in the direction A B, and no other cauſe be applied, which might either accelerate or retard its motion, or alter the direction of it, it will deſcribe the line A B in a certain time. But if another cauſe be at the ſame time applied to the *body*, in conſequence of which, if applied ſingly, it would have moved in the direction A C, with ſuch a velocity as to deſcribe A C in the ſame time that it would deſcribe A B in conſequence of the other cauſe; then, as Sir ISAAC NEWTON has proved, it will, nay it *muſt*, move in the direction A D, and deſcribe the whole diagonal A D, in the ſame time that it would have deſcribed either A B or A C ſeparately, if only one of the cauſes of motion had been applied.

But

But will the ſame reſult take place in the caſe of a ſimilar combination of motives prompting to different actions?

If a porter is offered a guinea for every mile that he will carry a letter in the direction A B, and no other cauſe or motive, either phyſical or moral, occur, he will probably go on in that direction, till either the motive ceaſe, by his deſire of wealth being fully gratified, or elſe ſome new motive, or ſome phyſical cauſe occur, to ſtop, or retard, or alter his courſe; ſuch as fatigue, or hunger, or thirſt, or ſome river, or ſea, or mountain, which he cannot paſs.

If the ſame porter were at another time offered either a guinea or half a guinea for every mile that he ſhould carry the letter in the direction A C, and no other cauſe or motive were applied, he would go in the direction A C, with juſt the ſame limitations and exceptions as in the former caſe.

And the evident facts, or general reſult, to

to be expected in both theſe caſes, will be admitted as true by thoſe who deny, as well as by thoſe who aſſert, the philoſophical doctrine of Neceſſity; and eſpecially that of the conſtant conjunction of motive and action. For it has never been ſaid, nor can it without the moſt glaring folly ever be ſaid, that there is no relation between motives and actions, or that there is no analogy or reſemblance between this relation and that of cauſe and effect in phyſics, or that motives are never conjoined with their proper actions: it is only the nature of the former relation, and the degree or extent of the reſemblance between it and the latter, and the preciſe point of the *conſtancy* of the conjunction of motive and action, that are the ſubjects of diſpute between philoſophers and the vulgar. It might even appear probable, from a ſuperficial view of ſuch inſtances of the relation of motive and action, that the conjunction between them was conſtant, like that between cauſe and effect in phyſics. I mean, that this might appear probable to men who either had not the uſual natural conſciouſneſs of ſelf-governing power and independent ac-

tivity in themſelves, or who, having ſuch conſciouſneſs, ſhould think fit to diſregard it as a fooliſh vulgar prejudice. But let thoſe two motives, prompting to different actions, be applied at once, and the error and the folly of ſuch an opinion will ſoon appear.

Let our porter be offered a guinea a mile for carrying the letter in the direction A B; and at the ſame time let him be offered half a guinea a mile for carrying it in the direction A C; and let him be aſſured, that if he earn the guineas, he cannot earn the half-guineas, and that if he earn the half-guineas, he cannot earn the guineas.

Will he go in the direction A B, or in the direction A C, or in the direction A D, or in any other direction, or will he remain at reſt at the point A?

I ſay, that if the doctrine of the *inertia* of mind, and the *conſtant conjunction* of motive and action, be true, he will go in the diagonal A D; and that it is folly for him to make a pretence of thinking, and

ridiculous

ridiculous to make any words about it; for go he *muſt* in that preciſe direction, as ſure as ever a projectile moved in a curve; and pretty nearly for the ſame reaſons. And this he *muſt* do, though he cannot earn, and knows that he cannot earn, one farthing by doing ſo: for the circumſtance of earning, or not earning, any thing by his work, relates merely to the vulgar notion of motive, "that for the ſake of which," and has nothing to do with the philoſophical notion of motive, which either conſiſts in, or at leaſt comprehends, the ſpecific principle of conſtant conjunction. Now, my purpoſe is to ſhew, that thoſe two notions are inconſiſtent: for though this appears to me ſelf-evident, and has been generally acknowledged by mankind, at leaſt by the vulgar; yet as philoſophers of ſuch eminence as Mr HUME and Dr PRIESTLY have not ſeen it, nor thought of it, it muſt be owned, that it requires a rigorous proof. And further I ſay, that if the porter do not go in that direction, the doctrine in queſtion muſt be falſe.

I do not ſay, that he will deſcribe the whole diagonal A D in the ſame time that he would have deſcribed either A B or A C ſeparately; for other motives or cauſes will occur to prevent his going with more than a certain velocity: For inſtance, the pain or fatigue of too violent exertions, or the phyſical impediments of want of ſufficient ſtrength or agility.

It muſt be obſerved, therefore, that my argument extends only to the direction, not to the velocity of the porter's motion, in ſuch a caſe of the combination of motives that are conſtantly conjoined with their reſpective actions, and are applied to a perſon who is incapable either of reſiſting motives, or of acting without them.

It may reaſonably be expected of every perſon who ſeriouſly believes the doctrine of Neceſſity, and the conſtant conjunction of motive and action, as aſſerted by Mr HUME, and who likewiſe underſtands and believes the compoſition of motion, as eſtabliſhed by Sir ISAAC NEWTON, that he

he ſhould admit at once my concluſion concerning the motion of the porter in the circumſtances ſpecified, without requiring any further argument in proof of it than what is comprehended in the algebraical canons already ſtated. Nevertheleſs, as there is reaſon to think that the doctrine of Neceſſity has been often maintained by men who knew nothing of NEWTON's *Principia*; and as the concluſion in queſtion is ſomewhat repugnant to common opinion, it may be neceſſary to ſtate the proof of it more fully.

It is, in the firſt place, ſelf-evident, that the porter, in the circumſtances ſpecified, muſt either remain at reſt at the point A, or move from it.

If he remain at reſt at the point A, it is plain there muſt be two motives completely ſeparated from their proper actions; which is contrary to the principle of conſtant conjunction. The ſuppoſition of his remaining at reſt may therefore be ſet aſide at once, without further examination.

The

The porter then muſt move from the point A; and if he move, he muſt move in ſome direction or another.

If he move in the direction A B, from his deſire to earn a number of guineas, which we ſhould think very natural and very prudent for him to do, a very powerful motive, to wit the deſire of earning a number of half-guineas, prompting him to go in the direction A C, is completely ſeparated from its proper action; which is contrary to the principle.

If he go in the direction A C, from his deſire to earn the half-guineas, then a ſtill more powerful motive, to wit, the deſire of earning the guineas, is completely ſeparated from its proper action; which is contrary to the principle.

If he go in any direction, ſuch as A E or A F, intermediate between A B, or A C, and A D, either the motive prompting him to go in the direction A B, or *that* prompting him to go in the direction A C, muſt be in part ſeparated from their proper actions;

actions; which is contrary to the principle.

If he go in any other direction, ſuch as A G, or A H, or A I, there muſt be two motives ſeparated from their proper actions, and an action without a motive, and in oppoſition to two motives; which is doubly or triply contrary to the principle.

The porter, then, according to the principle, has nothing for it but to go peaceably, and without murmuring, in the diagonal A D: for in this caſe both motives are conjoined with their actions, as far as is conſiſtent with their mutual interference and modification: the reſult partakes of both, and is different from what either action would have been ſingly, as from the application of one of the motives by itſelf. And the difference between the reſult from the combination of the two motives, and that which would have taken place if only one of them had been applied, will be exactly equal to the full

full (ſuppoſed) effect of the other motive; to wit, B D = A C, or C D = A B.

All theſe concluſions reſpecting the neceſſity of moving in the diagonal A D, would be admitted at once, as being both demonſtrably and experimentally true, with reſpect to a *body* which was free to move, and under the influence of correſponding forces, or phyſical cauſes of motion, applied in a ſimilar manner. If it remained at reſt at the point A, it would be admitted, that two cauſes were completely ſeparated from their effects; if it moved in the direction A B or A C, it would be admitted, that one cauſe was ſo; if it deſcribed A E or A F, it would be admitted, that one cauſe was in part ſeparated from its effect; and if the body deſcribed A G, A I, or A H, it would be admitted, that two cauſes were completely ſeparated from their effects; and that there was an *event* (commonly conſidered as an *effect*) without a cauſe.

It is proper likewiſe to point out, that, according to the principle, the porter, in the

the caſe ſtated, *muſt* go chearfully and willingly, not with a heavy heart and by conſtraint, in the diagonal A D: for motives of the kind ſpecified are not ſuppoſed to conſtrain a perſon, or to compel his *will*, but gently, though irreſiſtibly, to influence and determine it. If in ſuch a caſe the porter ſhould be *willing* to go only in the direction A B, or only in the direction A C, one or other of the motives applied would be completely ſeparated from its effect on his *will*; as obviouſly as both would be ſo, if he ſhould be found *willing* to remain at reſt at the point A.

On the ſame principles, too, it is demonſtrable, that if our porter were aſſured of a good round ſum, if he would go, in any ſtraight line that he pleaſed, to a certain point, and were at the ſame time aſſured of a guinea a mile for going in any right line that he pleaſed, which did not lead, either directly to or directly from the point ſpecified, he *muſt* deſcribe ſome curve line, as being under the influence of a projectile or tangential force, and of a centripetal force at the ſame time. *Vis*

centripeta eſt quâ corpora verſùs punctum aliquod tanquam ad centrum, undique trahuntur, impelluntur, vel utcunque tendunt. Now, it might ſurely be ſaid, with ſufficient propriety in common language, that the porter, in the caſe ſtated, is attracted, or impelled; and NEWTON himſelf would have admitted, that at leaſt he ſomehow tended towards the point or centre; while, at the ſame time, he ſomehow tended to go away from it, though not directly.

It would require much more mathematics than ever I was poſſeſſed of, to inveſtigate preciſely what ſort of curve he would deſcribe in any given caſe of a certain proportion of the tangential and centripetal motive; and I willingly leave that curious inquiry to thoſe who like it, and who think themſelves qualified to proſecute it with ſucceſs. I ſhall only ſay, that every thing which they ſhall demonſtrate mathematically from the principles aſſumed will be juſt as true as the principles themſelves are; and yet will be moſt notorioufly

riouſly and ridiculouſly falſe in point of fact.

Perhaps, therefore, it will be thought ſuperfluous to propoſe any experiment on ſuch a point, as no man in his ſenſes can be ſuppoſed to doubt what the reſult of it will be; and as it may even be doubted whether the moſt confident aſſertors of Mr HUME's doctrine will riſk a ſingle guinea on ſuch an experiment. Nevertheleſs I humbly conceive, that all thoſe who have profeſſed their belief of Mr HUME's doctrine, muſt be eager to put it to ſuch a teſt as I have ſuggeſted; as being confident that the reſult of it will be favourable to their ſyſtem: For all thoſe who fully underſtood, and unfeignedly believed, the principles aſſerted by him, muſt alſo believe the neceſſary conſequences of them, that are not impoſſible, till they have experience of their falſity, whenever ſuch conſequences are pointed out to them, even though they themſelves had not thought of them. This is no new caſe in ſcience; it happens every day to thoſe who are learning geometry and me-

chanical philoſophy. But we never hear of ſuch perſons refuſing to admit the inferences, though new and perhaps ſurpriſing to them, which are ſhewn to be neceſſary conſequences of principles formerly acknowledged. Now, for metaphyſicians, who, after due conſideration, have admitted Mr HUME's doctrine of Neceſſity, and been proud to aſſert it as their unalterable creed, to give it up without even putting it to the teſt of experiment, or waiting till it be demonſtrated to be abſurd and impoſſible; or for ſuch men to diſtruſt the reſult of its neceſſary conſequences, even though undoubtedly poſſible, on the bare mention of them, and only becauſe they are contrary to vulgar opinions and prejudices, and what is called *Common ſenſe*, for which Mr HUME and his followers have always expreſſed the greateſt contempt; is to acknowledge, that they had never in their hearts believed their own favourite ſyſtem; that they knew more of human nature than they choſe to avow; and, in particular, that they underſtood the relation of motive and action

action to be totally different from what they pretended to believe.

Now, all theſe ſuppoſitions are ſo injurious to the perſons to whom they relate, that it may well be thought illiberal barely to ſtate them, though only for the ſake of argument; and to aſſert ſuch things of any ſet of men, or even of any individual, would unqueſtionably be very unreaſonable and uncivil, and perhaps not perfectly ſafe; for it is well known that ſome philoſophers are very choleric. I conceive, therefore, that thoſe philoſophers who have profeſſed their belief in Mr HUME's doctrine of Conſtant conjunction *muſt* put my inference from it to the teſt of experiment, before they can with any credit or conſiſtency acknowledge it to be falſe, and give up the principle from which it is derived; unleſs, indeed, they can confute the reaſoning by which that inference was deduced, and ſhew, that a motive is conjoined with its action, even when no action whatever proceeds from it, and when a perſon does preciſely what he would have done

done if no ſuch motive had been applied to him.

It may be worth while, however, to point out, as a further illuſtration both of the reſemblance and of the difference between the relation of cauſe and effect and that of motive and action, that, in certain circumſtances, a compoſition of motion, the action of a perſon will take place from a combination of motives, very analogous to what takes place in a body from a combination of forces: ſo that a perſon ſo oddly conſtituted by nature as not to have the uſual faculties of mankind, or ſo unhappily perverted by falſe ſcience, as to diſregard the ſuggeſtions of his faculties, might be tempted to believe, that the two relations were in every reſpect the ſame, and that in both the conjunction was conſtant.

Let us ſuppoſe a porter to be ſo far inſtructed in geography, as to underſtand the terms commonly employed in that ſcience: Let him be aſſured of a certain ſum for every *minute*, or every *ſecond*, of *latitude*

Latitude that he ſhall go to the ſouth of the point where he ſtands: Let him at the ſame time be aſſured of a proportional ſum (according to the length of the degrees of *longitude*, at any given *latitude*) for every *minute*, or every *ſecond*, of *longitude* that he ſhall go to the weſt of the ſame point: and let him be allowed to conſider a little what would be beſt for him to do.

If he were a ſhrewd fellow, he would ſoon diſcover, that by ſteering his courſe ſouth-weſt, he would be paid, both for his *ſouthing* and his *weſting*. And if he chanced to know any thing of a right angled triangle, he would perhaps find means to calculate, that by going ſouth-weſt, that is, going in the diagonal of a ſuppoſed ſquare, he would earn as much by going ſeventeen miles, as he could have earned by going twenty-four miles either weſt or ſouth, or as he could have earned by going twelve miles ſouth and twelve miles weſt. And I think it ſhould be admitted as the probable or certain reſult of ſuch a combination of motives, that

that every perſon of competent underſtanding and knowledge, placed in the circumſtances ſtated, would go in the direction ſouth-weſt. It is obvious, that if a perſon does ſo, both motives applied are conjoined with their proper actions; and that the action performed is a *tertium quid*, reſulting from the combination of them both, and different from the ſimple effect of either of them applied ſingly, by the full effect of the other. And it is equally obvious, that if the perſon were to remain at reſt, both motives would be ſeparated from their proper actions; and that if he were to go only weſt, or only ſouth, that one of the motives would be ſeparated from its action. The keeneſt aſſertor of the doctrine of Neceſſity and conſtant conjunction, could ſcarce deſire, or indeed contrive, an illuſtration more favourable to his ſyſtem. And if no caſes but ſuch as this had ever been experienced or obſerved, it may be preſumed, that all mankind would have been naturally of the ſame opinion with Mr HUME concerning the relation of motive and action. But whenever ſuch a ſimple diſtinct circumſtance

ſtance, as that of conſtant conjunction, is ſpecified as ſubſiſting between them, it may be tried experimentally in innumerable caſes, and will ſoon be found not to take place.

It muſt be obvious to every perſon, that though in both theſe caſes that I have ſtated, motion in the diagonal is equally the neceſſary conſequence of the principles of *inertia* and of conſtant conjunction; yet in the former caſe, motion in that direction is not, while in the latter it is, in the well underſtood relation of an action to the motives of it. And it muſt be equally evident, that in the former caſe we ſhould all of us expect, from our common notion of the relation of motive and action, and from our knowledge of mankind, and of their conduct in ſimilar caſes, that a perſon would not go in the diagonal of the parallelogram, but in the direction of one or other of its ſides; and I have no doubt but it will be found, that he will do ſo. But this is to ſeparate completely one motive from its action. Now, this is all that I aim at proving at preſent. The *inertia* of

mind, and the abſolute and irreſiſtible force of motives, and any other relation, poſſible or impoſſible, between motives and actions, excepting only that one of conſtant conjunction, may ſtill be held; and any other doctrine of Neceſſity, except Mr HUME's, may ſtill be maintained, conſiſtently with what has yet been proved.

SECT.

SECT. X.

Mathematical demonſtration, that the doctrine of the Conſtant Conjunction of Motive and Action is abſurd, as being inconſiſtent with itſelf.

MAny expedients will no doubt be contrived to evade the inferences which have been offered as neceſſary conſequences of Mr HUME's doctrine; as the trial by experiment, if it is ever thought of at all, muſt, for very obvious reaſons, be the laſt reſource. I have not been able to think or hear of any ſuch expedients which appear to me of any conſequence; and have every reaſon to believe that there can be none. But there is one of them ſo commonly employed on all occaſions, ſo ſtrongly inſiſted on as ſufficient to ſolve all difficulties with reſpect to the doctrine of Neceſſity, and ſo important in its conſe-

quences, which are very different from thoſe commonly thought of, that I conceive it deſerves peculiar attention.

Every perſon is ready to ſay, that all motives which do not exactly concur, and yet prompt to actions that cannot take place ſeparately, muſt be conſidered as directly oppoſing one another.

This ſuppoſition is, in the firſt place, inconſiſtent with the univerſal analogy of phyſical cauſes; and, if admitted in phyſics, would imply an endleſs maſs of the moſt notorious and ridiculous falſities and abſurdities.

In the ſecond place, It is inconſiſtent with many of the beſt known facts with reſpect to human actions: for in theſe we can often obſerve the blended reſult or influence of different, but not oppoſite, motives.

But ſuppoſing for once, that it were true, or rather conſidering the caſe of motives really oppoſing one another, let us examine

examine the import and trace the conſequences of the doctrine of the conſtant conjunction of motive and action; for in this caſe it appears to be inconſiſtent with itſelf, and therefore *abſurd*, even in the ſtricteſt mathematical ſenſe of this term; while, in the caſe of the combination of motives, it was only inconſiſtent with plain matter of fact, and with the vulgar notion of motive; and therefore (ſtrictly ſpeaking) only *falſe*.

If motives of equal ſtrength directly oppoſe one another, it is held, that no action can take place, as they mutually counteract each other; but it is thought, that if motives of unequal ſtrength directly oppoſe one another, the ſtronger will not only prevail, but have its full effect, as if it were not oppoſed at all.

Thus, a porter aſſured of a guinea a mile for going due eaſt, and of as much for going due weſt, as faſt as he could, if his face chanced to be due north or ſouth, it is conceived, muſt remain at reſt till ſome new motive occur to determine his choice,

choice, and direct his course. But it is conceived, that if he were assured of a guinea a mile for going east, and only of half a guinea a mile for going west, he would go east at the rate required of him, and earn the guineas, notwithstanding the constant conjunction of motive and action; just as he would have done if no such opposite motive as the offer of the half-guineas had been applied.

Now, if these very plausible propositions were expressed in mathematical form, they would run thus:

$$X \equiv A = Y \equiv B,$$
$$X - Y = o \equiv o,$$
$$X - \tfrac{Y}{n} = X \equiv A;$$

which is absurd.

In common algebra, it is just $X = Y$, $X - Y = o$, $X - \frac{Y}{n} = X$; which is absurd.

Or if it were thought worth while to employ a diagram to illustrate so plain a proposition,

propoſition, in order to make the abſurdity viſible, it might be done thus:

Let A C and C D repreſent the equal force of the oppoſite motives, and let B C be a part of A C; it is aſſerted, that if A C be deducted from C D, the remainder will be nothing; but that if B C be deducted from C D, the remainder will be C D; which is abſurd.

In plain Engliſh, it amounts to this, that when ten are deducted from ten, there can remain nothing; but that when four, or five, or ſix, are deducted from ten, there will remain ten; which is abſurd.

There have been many inſtances of one error in an account or calculation, balancing, and thereby concealing another; but, ſo far as I know, this is the only inſtance in ſcience, and a very curious one it is, of a notorious *falſity* in the principle aſſumed being in a great meaſure corrected and concealed

concealed by a palpable *abſurdity* in the reaſoning employed. And I doubt greatly whether this could have happened, unleſs they who reaſoned from ſuch a principle had been ſecretly guided in their reaſonings, or at leaſt in their conceptions and in their belief, by ſome other principle, which they did not chuſe to acknowledge.

SECT.

SECT. XI.

Illuſtrations of the abſurdities and inconſiſtencies which are neceſſary conſequences of the doctrine of the Conſtant Conjunction of Motive and Action.

AS the arguments offered in the preceding ſection, to ſhew the *abſurdity* of the doctrine of the conſtant conjunction of motive and action, and its inconſiſtence with itſelf, though abundantly ſimple, are ſomewhat abſtruſe; and as there cannot fail to be, among men of ſenſe and men of ſcience, a very great diſtruſt of all ſuch general mathematical reaſonings on the point at preſent in queſtion; it will be proper to illuſtrate, by particular inſtances, the abſurdities and inconſiſtencies which in the laſt ſection have been expreſſed only in abſtract general terms.

With reſpect to the firſt point mentio
ed, namely, the unreaſonableneſs of ſu
poſing all motives that do not perfect
concur to oppoſe one another direct
which is the firſt expedient common
thought of to evade the argument fro
the compoſition of motion, it may be ve
eaſily illuſtrated.

We know that in phyſics the two ca
of oppoſition and combination of cau
are widely different, and have very di
ferent reſults. We ſhould be apt to thi
a man inſane, or at leaſt not fit to be re
ſoned with, who ſhould aſſert, that a cu
rent at right angles to the courſe of a ſh
had no other effect but to retard her pr
greſs, juſt as an adverſe current wou
do, and did not in the leaſt put her out
her courſe. Nor ſhould we have a muc
more favourable opinion of the unde
ſtanding of one who ſhould aſſert, that t
weight of a projectile, for inſtance a c
non-ball, ſhot obliquely to the horizo
had no other effect than merely to retar
and at laſt to ſtop, the motion of the pr
jectile; or that the mixture of blue wi
yello

yellow had no other effect than the mixture of black or white with it would have had; or that the addition of ſugar to lemon-juice neutralized the acid of it, as effectually as the addition of an alkali would have done. Such, however, is preciſely the nature of the ſuppoſition with reſpect to motives, which is ſtated in the beginning of the laſt ſection.

Moreover, in many inſtances of motive and action, we can ſee plainly the blended reſult of combined motives; as in the ſtory of *Appius Claudius* and *Virginia*, or indeed in any caſe, where, from fear or prudence, a perſon takes an indirect method to gain his chief and ultimate object; as when a thief ſteals, who dares not rob; or when a rogue cheats, who will not riſk his neck by ſtealing; or when a general employs ſtratagem, rather than open force, as thinking the latter, though ſure to be effectual, might coſt him too dear. And let it be remembered, that it is not ſaid that motive and action are never conjoined, but only that they are not conſtantly conjoined; nor that a blended reſult of com-

bined motives never takes place, but only that it does not always take place.

With reſpect to the ſecond point ſtated in the laſt ſection, namely, the *abſurdity* of ſuppoſing the ſtronger of two really oppoſite motives, not only to prevail, but to have its full effect as if unoppoſed, notwithſtanding the conſtant conjunction of motive and action, and the acknowledged mutual counteraction of oppoſite motives of equal ſtrength; it is, if poſſible, ſtill clearer, and more eaſily illuſtrated.

How ſhould we all be aſtoniſhed, if a man of ſuppoſed good ſenſe, and ſome knowledge, ſhould ſtart up and aſſert, that a mixture of equal parts of black and of white paint produced a grey paint; but that if the black or the white preponderated ever ſo little, the mixture would prove a perfectly black, or a perfectly white paint.

Or what ſhould we think of a philoſopher, who ſhould gravely maintain, that an adverſe current did not in the leaſt retard

tard the motion of a ſhip, unleſs it was equal to the velocity which ſhe derived from the wind; and that in this caſe the ſhip remained ſtationary; but that, whenever the current became ſo ſtrong as to give the ſhip a greater velocity in one direction than the wind gave her in the oppoſite, then the ſhip went down the current, juſt as faſt as if there had been no wind at all. Men who ſhould maintain ſuch opinions, if their converſation and conduct on other points correſponded to this ſpecimen, would undoubtedly be pronounced fit for bedlam.

Yet a philoſopher, who had adopted Mr HUME's doctrine of Neceſſity, and of the conſtant conjunction of motive and action, would not bluſh to ſay to his pupils, if they chanced to meet a ſot reeling home from his club, "This fellow muſt have a "moſt immoderate love of ſtrong liquor "and drunken company. You ſee here "what a life he conſtantly leads; yet he "has a ſtrong ſenſe of religion, a juſt notion "of virtue and moral conduct, a deſire "to preſerve a good character, nay a de-

"ſire

" fire of fame, like other men; he wiſhes " to enjoy good health, to proſper in his " buſineſs, and to make a fortune; he has " a wife and children, whom he loves, " and whom he wiſhes to provide for; he " is not ignorant of his duty to his friends, " to his country, and to all mankind: " Yet, in defiance of all theſe motives, he " abandons himſelf to drinking. Now, " this can proceed only from the extraor- " dinary violence of the motive that " prompts him to it. For there can be " no action without a ſufficient motive, " nor any motive without its proper ac- " tion: The conjunction of motive and " action, like that of cauſe and effect in " phyſics, is conſtant." And this idle talk would be thought ſenſe, nay, very ingenious reaſoning, and profound philoſophy.

Let us ſuppoſe, now, the drunk man to have heard what the philoſopher ſaid, and being ſufficiently able to ſpeak, though not very able to ſtand, to ſet about anſwering him, to the following purpoſe: " I know " nothing about your metaphyſics, and

" your

" your motives and actions; but I know
" very well how to make punch; and that,
" I can tell you, is no ſmall piece of know-
" ledge; for every thing depends on the
" nice proportion of the ingredients. If
" there be but one drop too much rum
" in it, it will be as ſtrong as rum, and
" without any taſte either of ſugar or le-
" mon-juice; and if there be but one
" drop too much water in it, it will be
" much worſe, for it will be mere water,
" without either ſtrength or taſte; and if
" there be one grain too much ſugar, or
" one drop too much lemon-juice, it will be
" as ſweet as ſugar, or as ſour as lemon-
" juice; which would never do. And I
" am philoſopher enough to know, as
" well as you do, that this is the conſe-
" quence of the conſtant conjunction of
" cauſe and effect."

My drunk man would be thought to ſpeak nonſenſe; and, to ſay the truth, not altogether without reaſon. Yet his nonſenſe would be wonderfully like the philoſopher's ſenſe; and I believe it would have puzzled SOCRATES himſelf to ſay which

which of them was the more abſurd; as both of them contain as direct and palpable a contradiction as it is poſſible to expreſs in language.

We ſhould doubtleſs think it no eaſy matter to add to the inconſiſtency juſt now ſtated; yet even this has been done, and, what is more, *muſt* be done, by every perſon who aſſerts Mr HUME's doctrine of Neceſſity, and yet admits that juſtice may be tempered with mercy; for inſtance, that a thief, juſtly condemned to be hanged, may be pardoned on condition of baniſhment; that paſſion may be moderated and reſtrained within certain bounds, by prudence; that one paſſion may be checked in its indulgence, though not quite eradicated or overcome by another; for inſtance, anger by fear; or that a debauchee, who diſtruſts, or perhaps does not reliſh, the maxim of a ſhort life and a merry one, may wiſely determine to be a little leſs wicked than he would like to be, that he may be the longer wicked. For in all ſuch caſes, the weaker motive trenches upon the ſtronger, and of courſe the action of

ſuppoſed

ſuppoſed effect proceeding from the latter is leſs than it would have been if unoppoſed; while in innumerable other caſes the reverſe takes place. Indeed the ſlighteſt attention to human conduct ſhews ſo clearly that the relation of motive and action is not a conſtant, but an occaſional and ſeparable conjunction; and that motives and actions are ſeparated much oftener than they are conjoined; that it is ſurpriſing the author of the Hiſtory of England ſhould even for an hour have continued in the opinion at preſent in queſtion.

Had I the pen of ARBUTHNOT or SWIFT, I ſhould write a little hiſtory of the life and opinions of a true Neceſſarian, whoſe thoughts and actions accorded with his profeſſion, and were inſeparably connected with the cauſes or motives that were applied to him. For ſuch a hiſtory would be the beſt refutation of the principle that has been aſſerted.

However unequal to ſuch a taſk, I ſhall venture to give a ſhort ſpecimen of what

manner of man a practical Neceſſarian *muſt* be.

His religious ſentiments I paſs over in ſilence; for the religion of a Neceſſarian is to me utterly incomprehenſible.

For the ſame reaſon, too, I ſay nothing of his ſpeculative principles of morality: Not that I would by any means inſinuate, that he would have no religion and no virtue, but only that his religion and virtue would be ſo ridiculouſly inconſiſtent with thoſe of other men, that it would be folly for other men to attempt to judge of them: For he would aſſume as undeniable axioms in religion and morals, what other men would conſider as palpable abſurdities: For inſtance, that a man might juſtly be hanged in this world, and damned in the next, for doing what he could not help doing.

His practical morality, or general character and conduct, it would be eaſy to give an account of, and even to demonſtrate mathematically, if required. But it

it would be very little to his credit; for every vicious tendency he might have would trench moſt grievouſly on his virtues, if he had any; and every temptation to evil would make him worſe than he was before. He would not, and indeed he *could* not, emulate the *juſtum et tenacem propoſiti virum* of HORACE; nor could he ever prove the

Felix ille animi quem non de tramite recto,
Impia ſacrilegæ flexit contagio turbæ.

He never *could* be perfectly virtuous in thought and deed, but when he had no temptation, or no opportunity, to be vicious. He would be brave, or, more ſtrictly ſpeaking, he would not be afraid, only where he knew not of any danger; he would be patient only when he had nothing to ſuffer; he would be juſt only when he could get nothing by diſhoneſty; he would be temperate and chaſte only where he had no opportunity to gratify his appetites, or had no appetites to gratify.

In ſcience he would be a prodigious ſceptic, and of courſe would fancy himſelf a mighty philoſopher; and perhaps find means to perſuade other people to think ſo too; as has often happened already.

In politics he would be a *Trimmer*, and one of a very peculiar kind. If he got a ſeat in the Houſe of Commons, he would be ſadly perplexed, and perhaps find it impoſſible, to chuſe a ſide, if he had no other principles but pure public ſpirit to direct him. A puzzling debate about the good of the nation would be as fatal to him as it was to *Sir Francis Wrongbead*. But having much deſire of popularity, and ſome little wiſh for wealth and power, and no proſpect of any good thing from the miniſter, he would of courſe join the oppoſition, whoever was in or out, and would ſpeak loud and long, and vote uniformly with them. But whenever the miniſter diſcovered his blind ſide, (which could not long remain a ſecret), he would immediately put an end to his ſpeeches, and his oppoſition, without the ſmalleſt expence

to

to government, or retarding, even for an hour, the payment of the national debt. The mere offer of a good place or penſion, on condition that he ſhould ſpeak and vote with the miniſtry, though it could not bring him over to them, would effectually undo him as a patriot. It would, in the firſt place, mar his oppoſition-ſpeech completely.——This indeed is no new caſe; ſomething of the ſame kind once happened to DEMOSTHENES, after receiving a handſome preſent from PHILIP. He ſpoke againſt PHILIP, it is true; but he had loſt his voice, and the Athenian people could not hear him. His witty countrymen ſoon diſcovered, that he had got the Ἀργυραγχη, or ſilver-ſore-throat; a diſeaſe not deſcribed by HIPPOCRATES or GALEN, but ſaid to be endemic, and well underſtood in all popular aſſemblies; and all the world knows that it is quite impoſſible either to prevent or to cure it.——But to return to our Neceſſarian in the Houſe of Commons. Being under the influence at once of his patriot-principles, and of the great offer made him by the miniſter, it is plain, that he would either not ſpeak at

at all, or not ſpeak ſo as to be heard or underſtood, or not ſpeak to the purpoſe on either ſide. If the queſtion was put, he neither would, nor indeed *could* he, ſay either *Aye* or *No*; for that would be to ſeparate a motive from its action; and therefore he would of neceſſity either be ſilent, or utter ſome ſound different from either *Aye* or *No*: For example, a combination of the two, if ſuch a thing were poſſible, or very probably ſome exclamation expreſſive of embarraſſment and diſtreſs. But if the Houſe divided, his caſe would be at once ridiculous and deplorable. He might be expected, firſt of all, to endeavour to place himſelf in the door-caſe; inclining, perhaps, more to the Houſe, or more to the lobby, according to circumſtances. But this not being allowed, he would try to ſneak off, or to conceal himſelf in ſome corner or ſome garret; nay, he might jump out at the window, or lay violent hands on himſelf; in ſhort, he might do any thing that he pleaſed, or that he could think of, except ſtaying in the houſe, or going into the lobby; for he would know that that would be to vote either with the

Ayes

Ayes or with the *Noes*, as the tellers would find him on one ſide or the other, in ſpite of all his remonſtrances. Now, for him to vote on either ſide, would be to ſeparate completely the oppoſite motive from its proper action.

In the common affairs of life, he would be wavering and irreſolute, ſeldom forming, and never executing, any ſteady or uniform purpoſe; and fond of feeble councils, and of imperfect and inadequate meaſures, on all occaſions.

He would be very often in love; but would never marry; for however much he might love his gentle miſtreſs, yet, like *Tom Thumb*, at the thoughts of marriage he would grow pale.

He would often ſet out on a journey, and ſeldom arrive at the end of one. And he would often be found hopping through the world with one boot on and the other off, like *Prince Prettyman*, in the Rehearſal, who, by the by, is the only practical Neceſſarian that ever I ſaw.

If

If he eſcaped the laſh of the law for ſome of his pranks, which I can by no means anſwer for, he would ſoon be examined by virtue of a commiſſion of lunacy; and would inſtantly be pronounced *non compos mentis*; a phraſe never more properly applied than to ſuch a Being, who, though not mad in other reſpects, had loſt or renounced the power of governing himſelf.

Abſurd and fooliſh as theſe aſſertions muſt appear, I beg it may be obſerved, that they are all neceſſary inferences from the doctrine of the *inertia* of mind, and of the conſtant conjunction of motive and action; and if this doctrine be true, they muſt all be truths, and ſuch truths as no power in heaven or earth can alter. They ſtand on the ſame footing with the neceſſary truths in geometry and in mechanical philoſophy.

Geometers do not pretend to prove the exiſtence of cones, ſpheres, and cylinders; but they have demonſtrated, that if it ſhould pleaſe God to create a cone, a ſphere,

ſphere, and a cylinder, of the ſame height and the ſame diameter, they *muſt* be to one another in the proportions 1, 2, 3.

Sir ISAAC NEWTON never ſet about proving the exiſtence of matter, and the reality of motion; and I dare ſay was much too wiſe a man ever to have attempted to reaſon with men who required any proof of theſe things. But, taking them, and the ſimple laws of motion as aſcertained by experiment and induction, for granted, he has demonſtrated what the reſult *muſt* be in innumerable caſes.

I by no means aſſert, or undertake to prove, the exiſtence of mankind, the *inertia* of mind, and the conſtant conjunction of motive and action; and I think too highly of divine wiſdom and goodneſs, to believe, or even to ſuppoſe, that God ſhould ever make ſuch a fooliſh, helpleſs, wretched Being, as the Neceſſarian man; the notion of which appears to me altogether unworthy of the human underſtanding, conſidering the means of better information which we poſſeſs; but I aſſert with

confidence, that if ſome malevolent Dæmon ſhould contrive to make ſuch a Being, or if ſome philoſopher, crazed with falſe ſcience, ſhould reſolve to act conformably to the principles in queſtion, and perſevere in doing ſo, his conduct *muſt* be what I have ſpecified; for the contrary ſuppoſition involves a direct contradiction.

Or if the ſame principles be extended (as hath ſometimes been done) to the motives and actions of the Supreme Being, to whom we aſcribe juſtice and mercy as motives of his actions, then, whenever juſtice prompted to puniſh, and mercy to ſpare, God himſelf could neither be juſt nor merciful. And let it be obſerved, that the folly and impiety of ſuch an inference lies entirely in the principles aſſumed, and by no means in the reaſoning employed, which is as innocent and ſimple, and juſt, and the concluſion therefore, (if the principles be true), as unqueſtionable, as that if three be deducted from five, there can remain but two.

SECT.

SECT. XII.

Obſervations on the caſe of the increaſe or concurrence of Phyſical Cauſes and of Motives reſpectively.—The reſult with reſpect to Phyſical Cauſes conſiſtent with the principle of Conſtant Conjunction.—The reſult with reſpect to Motives only ſometimes conſiſtent with that principle, and often repugnant to it, but always conſiſtent with the vulgar notion of Motive.—Obſervations on the parallel caſe of the increaſe or concurrence of the external, partial, exciting Cauſes in Phyſiology.

IN the preceding ſections, I have conſidered the two caſes of the combination and the direct oppoſition of motives and of phyſical cauſes, reſpectively; and have illuſtrated very fully the various inferences drawn as neceſſary conſequences from the principle of conſtant conjunction of cauſe

and effect, motive and action. Thoſe inferences appear to be very generally, if not univerſally, true with reſpect to cauſes and effects; but in many caſes falſe, and in others abſurd, with reſpect to motives and actions. Though this be amply ſufficient to prove, that the relation of motive and action is not a conſtant, but an occaſional and ſeparable conjunction; yet with a view to ſhow more clearly the difference between the two relations, and to aſſiſt in the inveſtigation of the nature of the relation of cauſe and effect in phyſics, it may be uſeful to conſider the third caſe of the application of cauſes and motives, reſpectively, namely, the increaſe, addition, or exact concurrence of them. This caſe is juſt as inſtructive as the others; and in it the difference between the reſult according to the vulgar notion of motive, "that for the ſake of which," and the reſult according to the notion of phyſical cauſe, including the circumſtance of conſtant conjunction with its effect, is as real, and as great, as in the other two caſes, though perhaps it is not quite ſo obvious; in conſequence of which, on a

ſuper-

ſuperficial view, the analogy between the two relations in queſtion appears more perfect in this than in the other two caſes; but this error is ſoon corrected, when we attend ſtrictly *ad inſtantias particulares, earumque ſeries et ordines.*

As fair and obvious inſtances of the increaſe, addition, or exact concurrence, of phyſical cauſes, either of the ſame or of different kinds, but all having the ſame kind of effect, we may take the following: —Heat applied in various degrees, from the ſlighteſt that we can perceive or meaſure, to the greateſt that we can produce, or have any opportunity of obſerving; correſponding to which degrees of increaſe or addition, and conſtantly conjoined with them in the ſame kind of ſubſtance, provided no other cauſe interfere, we obſerve expanſion of the ſolid ſubſtance in various degrees, then fuſion of it, then expanſion of the fluid ſubſtance in various degrees, then evaporation of it, then more and more expanſion of the vapour:—Or with reſpect to motion, a ſhip in ſtill water, and with a gentle breeze, advancing with

with a certain velocity, when ſhe has but one ſmall ſail ſpread to the wind; and quicker and quicker, as ſhe ſets more and more ſail; and ſtill quicker when the wind becomes greater; and ſtill quicker when the turn of the tide produces a favourable current:—Or a cannon-ball being projected with a certain velocity from the mouth of a gun loaded with one ounce of gunpowder, but with a much greater velocity when the charge is a pound, and with a ſtill greater when the charge is twelve pounds of powder:—Or with reſpect to gravitation, when a body near the ſurface of the earth falls towards it with a certain incipient velocity; but with a greater velocity towards a greater maſs of matter, as, for example, Jupiter, or the ſun, if placed at the ſame diſtance from the ſurface of either of them:—Or when a body at the ſurface of the earth falls fifteen or ſixteen feet in the firſt ſecond, which, at the mean diſtance of the moon, falls but the three thouſand ſix hundredth part of ſixteen feet in the firſt ſecond, ſo as to fall only ſixteen feet in the firſt minute, by the conſtant accumulation of its own motion.

This

This laſt inſtance I mention as ſerving to keep in mind, that in caſes of phyſical cauſe and effect, the principle of change is, ſtrictly ſpeaking, not the thing uſually termed the *Cauſe*, but a certain relation between it and the ſubject in which the change occurs. Now, a relation between two things may depend, not merely on the things themſelves, nor on their reſpective qualities, but either wholly or partly on ſome other relation between the things. Thus, we know that gravitation, or the tendency of every particle of matter to every other, varies according to the diſtance of the bodies, or maſſes of matter; and decreaſes as the ſquare of the diſtance increaſes. But the diſtance between two bodies is plainly no quality of either of them, but a relation between them.

Correſponding to theſe caſes of phyſical cauſe and effect, and on a ſuperficial view ſo perfectly analogous to them, as ſcarce to exhibit any difference, are the following common caſes of motive and action. —A porter will for a ſhilling (that is to ſay, his deſire of earning the ſhilling be-

ing his motive) carry a letter a mile. For a guinea he will carry it one and twenty miles, which he would not do for one ſhilling, nor even for two. For an hundred pounds, he will engage to do as much of that kind of work as he can in a twelvemonth.—A labourer will work a whole day, but not a week, for a ſhilling. He will work a whole week for ſeven ſhillings; and perhaps a whole year for twenty pounds.—A weaver will make a certain quantity of cloth for a certain ſum, and more and more, very exactly, in proportion to any larger ſums that may be offered him.—Theſe are all inſtances of motive and action bearing ſuch a cloſe and ſtriking relation to *proper* quantity, that there can be no cavil about them. There would be many more actions from motives of various kinds, equally analogous to the caſes of phyſical cauſe and effect, were it not that oppoſing motives often occur, which check many actions that otherwiſe would be in proportion to their reſpective motives. Thus, we are often reſtrained from doing many exceſſive or extravagant actions, from extraordinary motives

tives of benevolence, of ſelfiſhneſs, of malice, or paſſion of any kind, by conſiderations of juſtice, of prudence, or of humanity.

It is neceſſary, therefore, in point of candour, when we would point out the difference between the reſult of the increaſe or concurrence of motives and that of phyſical cauſes, with reſpect to the principle of conſtant conjunction, to conſider only ſuch actions as are either not at all reſtrained in their degree by the influence of oppoſite motives, or not more reſtrained in the inſtances wherein they do not occur, than in thoſe in which they do occur, in a degree accurately proportionate to their reſpective motives.

Such caſes we may eaſily make for ourſelves, in any porter, labourer, or weaver. For example, let a porter be offered, inſtead of a ſhilling, a guinea, or an hundred guineas, for carrying a letter an hundred yards. I conceive that he will do the work, and pocket the money, with great ſatisfaction; but without inſiſting

on going twenty miles, or on working a whole year, for his generous employer, and thereby ſhewing the conſtant conjunction of motive and action.

It would be needleſs, and indeed unpardonable, to have recourſe to diagrams, or to algebraical *formulæ*, or even to arithmetical calculation, in order to ſhew the difference between the reſult of the increaſe or concurrence of phyſical cauſes, and that of a ſimilar increaſe or concurrence of motives; and the inconſiſtency of the reſult in many examples of the latter kind with the principle of conſtant conjunction; and the repugnancy of it to the notion of quantity, which amounts to abſurdity, even in the ſtricteſt ſenſe of this term. The illuſtrations of the ſhip, and of the cannon-ball, muſt be ſufficient for my preſent purpoſe. To ſuppoſe a ſhip to advance ſometimes no faſter on increaſing her ſail, or on the wind increaſing, or on her getting into a favourable current, than ſhe did in ſtill water, with a ſmall ſail, and with a gentle breeze; and to ſuppoſe a cannon-ball ſometimes

times to move no faſter from the mouth of a cannon with the force of one or of twelve pounds of gun-powder, than it would have done with the force of one ounce of the ſame kind of powder, would be a moſt extravagant and fooliſh error; nor do I believe there is in the whole Britiſh fleet a ſingle cabin-boy or powder-monkey, who would fall into ſuch a miſtake. If any perſon, from uncommon deficiency of underſtanding or attention, ſhould fall into ſo ſtrange an error, it would be eaſy to ſet him right; but if a perſon ſhould aſſert, that ſuch a reſult, and ſuch occaſional varieties in the reſult, in thoſe caſes, might take place, notwithſtanding the conſtant conjunction of cauſe and effect, he would be maintaining an abſurdity, and, though not a direct contradiction in terms, at leaſt a propoſition immediately reſolveable into ſuch a contradiction; and if he ſpoke *bona fide*, he would be inſane, and conſequently unfit to be reaſoned with.

Such preciſely would be the ſituation of one, who ſhould aſſert the correſponding

propoſition, with reſpect to the caſes of motive and action.

It muſt, I think, be obvious to every perſon of competent underſtanding, and knowledge of human nature, that the different reſult from the increaſe or concurrence of motives prompting to the ſame kind of action, on different occaſions, is to be expected and foreſeen; that on ſome occaſions the motive is to have its full effect, or to be completely conjoined with its proper action, and on others not; and that, in both theſe caſes, the action performed, whether proportioned to the motive that prompts to it, according to the principle of conſtant conjunction, or quite diſproportioned to it, and in repugnance to that principle, equally ſtands in the familiar and well-underſtood relation of a voluntary action to its motive, or "that "for the ſake of which."

Hence we may infer with certainty, that thoſe who expect and foreſee that variety in the reſult, on different occaſions, with reſpect to motives and actions, but not

not with reſpect to phyſical cauſes and effects, *could* not have believed the two relations to be the ſame, nor even the principle of conſtant conjunction to make a part of the former relation, as it does of the latter; and that all of them *muſt* have had, not only the conception, but the belief, of the relation of "that for the ſake of "which," and no other, as ſubſiſting between motives and actions.

Though not immediately connected with the purpoſe of this Eſſay, yet as highly ſubſervient to the more remote and general object of my inveſtigation, the nature of the relation of cauſe and effect in phyſics, and of the various principles of change to which the phenomena that we obſerve ought to be referred, I think it may be worth while here to point out both the reſemblance and the difference between the reſult from the increaſe or concur-

concurrence, as well of phyſical cauſe as of motives, reſpectively, and the reſul in the correſponding caſes in the phyſiolo gy both of animals and vegetables.

In the phyſiology of theſe, as well as i the voluntary actions of intelligent Beings we obſerve a mixture or union of cauſe or principles of change. There are cer tain external circumſtances, to which th changes in vegetables, and many of thoſ in animals, bear ſuch an evident relation and one ſo *like* to that of cauſe and effec in lifeleſs bodies, that the former have al ways been regarded as the cauſes of th latter. It appears, however, on giving due attention to the changes obſerved and to all the circumſtances connect ed with them, that the relation betwee the changes and the external circumſtan ces is not the *ſame* with that of cauſ and effect in lifeleſs bodies; that th external circumſtances are not the ſol cauſes or principles of the changes obſer ved, but only partial and acceſſory cauſe of them, though perhaps indiſpenſably re quiſit

quiſite for them; and that there is in the ſubject another principle of change, the concurrence of which is no leſs requiſite for the production of thoſe changes than the application of the external cauſes. To this we give the name of the *Vital Principle*, or *Principle of Life*; meaning thereby only to expreſs a fact, and give a name to ſomething which we have frequent occaſion to ſpeak about, but without intending to expreſs any opinion, or to inſinuate any hypotheſis, concerning the nature of it; which is hitherto unknown, but well deſerves to be inveſtigated.

Common language affords no appropriated word or phraſe, correſponding to *motive* or *final cauſe*, which we uſe in ſpeaking of voluntary actions, to denote the partial external cauſes, whoſe concurrence with the internal vital principle is requiſite for the production of phyſiological changes. Medical language, however, affords a phraſe, hitherto employed chiefly or ſolely in ſpeaking of the correſponding partial and acceſſory cauſes of diſeaſes, namely, *occaſional* or *exciting cauſe*, the meaning

meaning of which, I think, may, with
much impropriety, be extended from
thology to phyſiology; as the generic
ture of the notion to be expreſſed by it
both ſubjects muſt be obvious; and
ſpecific meaning of it, in different ca
muſt be ſufficiently explained by the
ſtances to which it may at different tim
be applied. And ſuch an eaſy and nat
ral extenſion of the meaning of a we
underſtood phraſe is more agreeable, a
leſs embarraſſing, than the introducti
of a perfectly new word or phraſe; eſp
cially when employed to denote wh
was before in ſome meaſure know
though perhaps not much attended
and expreſſed by a familiar, but amb
guous phraſe.

For, however imperfect their langua
has been on this point, the actions of ma
kind, on many of the commoneſt as w
as moſt important occaſions, as in agr
culture, in medicine, in the breeding
animals, ſhew plainly, that they not on
perceived a difference, but had even ſom
notion of the nature of the difference, b
twe

tween the partial exciting cauſes of phyſiological changes and the full phyſical cauſes of the changes obſerved in lifeleſs bodies. That ſome of them, in their reaſonings on phyſiology and pathology, have overlooked that difference, and of courſe have fallen into error, and ſometimes into nonſenſe, in their ſpeculations, cannot be denied. Phyſicians, in particular, have often done ſo. But this proceeded from their reaſoning haſtily and careleſsly, by means of ambiguous words, without due attention to the differences of the things about which they reaſoned, or even to the differences of their own natural notions, occaſionally expreſſed by the ſame phraſe.

All this may be eaſily illuſtrated by many familiar and unequivocal examples. Thus, though the principle of life be preſent in full perfection, as in a freſh egg, or a ripe acorn, unleſs the proper external circumſtances, or exciting cauſes, concur, no change will proceed from it. For example, if a certain degree of heat be not applied, the egg and the acorn will re-

main in the ſame ſtate (at leaſt without any life or growth) for many years.

If the principle of life be a wanting, for example, if the egg be addle, and the acorn unripe or rotten, whatever heat be applied, and however favourable the other exciting cauſes, ſuch as moiſture, and earth, and light, and air, may be, no chicken and no tree will ever be produced.

But when both the vital principle is preſent and perfect, and the exciting cauſes concur, then the phyſiological changes or effects take place, as certainly, and with as little appearance of any kind of optional or ſelf governing power in the ſubject, as the ſimple effects in lifeleſs bodies from the application of phyſical cauſes. But even in theſe circumſtances, the phyſiological changes, though they may be increaſed and accelerated to a certain degree by an increaſe of the exciting cauſes, and diminiſhed by a diminution of theſe; yet are by no means accurately proportioned to them, according to the principle

ciple of conſtant conjunction, or as pure phyſical effects are to their cauſes.

Thus, a freſh hen's egg, in ordinary circumſtances of air, reſt, &c. if heat be uniformly applied to it, to the degree of about 100 of Fahrenheit's ſcale, will be hatched in about three weeks. If a lower degree of heat be applied to it, or if the application even of that proper degree be often and long interrupted, the egg will be longer of being hatched; as happens to the eggs firſt laid of any brood, which are hatched much about the ſame time with thoſe laſt laid, though theſe were perhaps a fortnight later of being laid than the firſt. Poſſibly a certain very moderate increaſe of heat, beyond even what is commonly applied, may accelerate a little the hatching of the egg; but if a much greater degree of heat, for example, 200° or 300°, were applied to the egg, all other circumſtances being the ſame, inſtead of being hatched in three days, it would be roaſted in three minutes.

If a freſh and ripe acorn were planted

in Windſor foreſt, with the degree of heat, of moiſture, of air, &c. which it would meet with there, it would ſoon vegetate, and in two hundred years would grow to be a ſturdy oak. The ſame acorn, in the poorer ſoil, and chilling climate of Scotland, would grow more ſlowly and imperfectly; and in the dreary regions of Iceland or Greenland, it would not grow at all. In France or Italy, with the aid of their more genial climate, it would grow more quickly even than in England. In the torrid zone, at leaſt in a ſituation where the heat is very great, as near the level of the ſea, it would either not grow at all, or it would be feeble and ſickly; it would never arrive at maturity, nor continue its ſpecies; and even the individual plant would ſoon periſh. If a very great degree of heat and moiſture were applied, as in a ſtove or oven, to try how much its growth might be haſtened or increaſed, it would not vegetate in the leaſt, and might be thoroughly boiled or ſtewed in an hour.

In the animal body, great changes may be produced by exciting cauſes in concurren-

rence with the vital principle. I ſhall ſay nothing of diſeaſes, as I do not intend this Eſſay as a medical treatiſe; but ſhall conſider ſome of the ſalutary changes which, by ſuch a combination of cauſes, may be produced in our bodies.

It is generally believed, and I hope it is in ſome meaſure true, that by the uſe of certain drugs ſtrength may be given, or at leaſt reſtored, to the human body; for example, by Peruvian bark, and by the calx of iron. A perſon may grow ſtronger, by taking a drachm of the former, and ten grains of the latter, every day; and perhaps ſtill ſtronger, by taking two, or four, or ten times that quantity, of each of thoſe medicines, daily. But if he ſhould take it into his head to ſwallow a pound of each of thoſe drugs every day, in hopes of obtaining a proportional increaſe of their beneficial effect, he would add as little to his ſtrength as to his ſtature; and probably would injure his health, and impair his ſtrength very greatly.

Whatever may be thought of the efficacy

cy of ſuch drugs, it is certain at leaſt, that, by a certain quantity of food and of exerciſe, other circumſtances being ſuch as we commonly find them, a man will juſt be kept alive, and will be very weak; by more food, and more exerciſe, he will grow gradually ſtronger; by the natural quantity of both, he will have the natural degree of ſtrength. By a kind of over-feeding or cramming, the Ἀναγκοφαγια of the ancient Athlets, correſponding to the high feeding of horſes for many purpoſes, with proportional exerciſe, he will acquire preternatural and athletic ſtrength, perhaps dangerous in its tendency, and inconſiſtent with health. But if he carries either the feeding, or the exerciſe, or both, beyond a certain degree, inſtead of growing ſtronger, he will become every day weaker; he will ſoon be worn out, or may even faint, or die, from his violent exertions.——The ſame may be ſaid with reſpect to the beneficial, exhilarating, ſtrengthening, vivifying effects of wine, or ſometimes even of brandy, when taken in moderate quantity; and the pernicious, enfeebling, ſtupifying, and ſometimes fatal

effects of them, when taken in too great antity.

In like manner, when the phyſiological ect of an occaſional or exciting cauſe ids to impair or to deſtroy life, to a cern degree there may be a proportion beeen them, like to that of phyſical cauſe d effect in lifeleſs bodies; as in many orbid cauſes, and the diſeaſes proceedg from them. But the total extinction life admits not of degrees; nor can it, erefore, be proportioned to the increaſe concurrence of external occaſional cau, as pure phyſical effects in lifeleſs bos, or even in living bodies, may be to eir full phyſical cauſes.

A man may be as effectually killed by e muſket-ball, or even by one blow on e head or on the ſtomach, though perps no viſible injury is done to his frame r ſuch a blow, as he could be by a thound muſket-balls piercing every part of s body, or as he could be if he were own from the mouth of a cannon. In eſe laſt caſes, the phyſiological effects

are

are not proportioned to their occaſional cauſes; nor can they be ſo; but the ſimple mechanical effects of the ſame things, to wit, the number and velocity of the balls, and the quantity of the powder in the cannon, are proportioned to them as their full phyſical cauſes.

In like manner, though a very moderate degree of heat will as completely extinguiſh life as the heat of a great furnace could do, ſo that no greater effect on life can proceed from the heat of the furnace than from the more moderate heat; yet the pure chemical effects of the greater heat, expanſion, inflammation, evaporation, calcination, fuſion, vitrification, &c. are produced, and are proportioned to the heat as their full phyſical cauſe.

Even where the principle of life has no ſhare in the production of the phænomena, but where theſe depend partly on the internal conſtitution of a lifeleſs body, or the relation of its conſtituent parts to one another, partly on the concurrence of an external occaſional cauſe, the changes that take

take place in the ſubject, though in ſome meaſure proportioned to the occaſional cauſe, are by no means completely ſo; nor is that cauſe conſtantly conjoined with that kind of effect.

Thus, the fermentation of muſt, or of wort, and the putrefaction of fleſh, depend on ſuch a combination of principles of change. Beſides the conſtitution of the ſubject with reſpect to mixture, and moiſture, &c. the concurrence of heat is requiſite to fermentation of every kind. In the temperature of 20°, it will not go on at all; in that of 40°, it will go on, but very ſlowly; in a temperature from 50° to 60, it will go on moderately, and properly for the uſeful purpoſes of making wine or ale; in a temperature from 80° to 100°, it will go on violently, and much too faſt for thoſe uſeful purpoſes. But in a heat of 200°, or in the greater heat of *Papin*'s digeſtor, or of a furnace, it will not go on faſter, and probably not at all; but the ſimple effects of heat, that is, the changes reſulting from the relation between heat and the ſubſtances to which it is applied,

will take place, and will correſpond to the degree of heat.

Now, let us compare together theſe various reſults, in the correſponding caſes of the concurrence, or increaſe, of full phyſical cauſes applied to lifeleſs bodies; of partial concurrent cauſes applied to ſuch bodies; of external, occaſional, exciting cauſes, applied to living bodies; and of motives applied to living intelligent perſons.

The full phyſical cauſes are conſtantly conjoined with their reſpective effects; which accordingly correſpond to them, not only in kind, but in degree or quantity.

The partial, exciting, concurrent cauſes, whether applied to lifeleſs bodies, or to living animals and vegetables, are not conſtantly conjoined with thoſe changes that are referred to them; nor, conſequently, do thoſe changes always correſpond to them in degree or quantity, nor even in kind.

Motives

Motives are not conſtantly conjoined with their reſpective actions; nor, conſequently, do theſe correſpond to them in degree or quantity, even where they do ſo in kind.

But the actions always correſpond to the vulgar notion of motive, "that for the ſake of which." The porter, the labourer, the weaver, in the examples given, do juſt what is requiſite to obtain their object, Το ὑνεκα και το ἀγαθον, and no more. They ſeem to give, or allow, as much influence or effect to the motives applied, in any caſe, as may ſecure that object, and to prevent their further well-known effects, which in other caſes they would allow to take place.

Now, this implies ſomething more than intelligence in the perſon; for intelligence in the ſubject to whom the motive is propoſed is implied in the very notion of motive. That fact of the action always correſponding to the motive in point of intelligence, and attainment of the object propoſed, but yet not always being pro-

portioned to it, or correſponding to it in point of quantity, is equally inconſiſtent with the principle of conſtant conjunction, and with the ſuppoſition of mere chance, or the want of any power in the Being who acts, to allow or to prevent the full effect of the motive. It implies the poſſeſſion and exerciſe of ſuch a power.

A maſs of ice expoſed to heat, a ſhip under ſail, a cannon-ball when ſhot from a cannon, wort in *Papin*'s digeſtor, an egg placed in a common oven, an acorn planted in very moiſt earth in the torrid zone, a man who has juſt drank a quantity of brandy, a fellow who is offered a ſum of money, on condition that he drink a certain quantity of brandy, and who is willing to earn the money on that condition, though otherwiſe not diſpoſed to drink brandy, which, though a ſhameful, is a real caſe, and not a very uncommon one; are all ſubjects ſuſceptible of change, and all have certain cauſes, or principles of change, applied to them.

The ſix firſt of them are equally deſti-

tute

tute of intelligence and of ſelf-governing power.

The three firſt of them, being expoſed to the full phyſical cauſes of certain changes, undergo thoſe changes; which are proportioned in degree to the increaſe or concurrence of their reſpective cauſes.

The fourth, fifth, and ſixth of them, are under the influence of certain principles of change, which are the full phyſical cauſes of certain changes, and only the partial, concurrent, exciting cauſes of others: the former ſet of changes takes place conſtantly, and always in proportion to their cauſes; the latter ſet of changes either does not take place at all, or at leaſt the changes are not proportioned to the partial exciting cauſes applied; nor is the peculiar moderate effect of a ſmall degree of theſe obtained, when a greater degree of them is applied; the more violent and purer phyſical effects of which take place uniformly.

In the two laſt ſubjects, to which we ſuppoſe

ſuppoſe principles of change to be applied, there is equally intelligence; but in the laſt of them only there is any ſelf-governing power, with reſpect to the change, or any power of ſeparating, even in part, the principle of change from the change correſponding to it, ſo as to obtain or permit the moderate effect or influence of it, without the greater effect, proportioned to the degree of it, and which ſometimes would take place.

The man who drinks brandy, notwithſtanding his intelligence, and his deſire to obtain only the good effects of it, will experience phyſiological changes or effects correſponding to that exciting cauſe, and in a great meaſure proportioned to the degree of it; and accordingly theſe effects, from one degree of it, will be uniformly ſlight, and from a greater degree of it, will be uniformly violent.

But the action of the fellow who drinks brandy *merely* in conſideration of a motive propoſed to him, which action is conſidered as the effect of that motive, and indeed

deed correſponds to it perfectly in one way, is by no means proportioned to the degree of the motive propoſed, but only to what it is requiſite to accompliſh. And if this can be accompliſhed by drinking one glaſs of brandy, the fellow (whom we ſuppoſe not to be ſuch a fool as wilfully to endanger his health or life without knowing why) will drink no more of it; tho', if he could not otherwiſe have accompliſhed his purpoſe, he would perhaps have endangered his health or life by drinking a much larger quantity; that is, by doing an action in a great meaſure, or as far as he was able, proportioned to the degree of the motive applied.

SECT. XIII.

Obſervations on ſome circumſtances that have contributed to conceal from the view of men of ſcience the abſurdities and inconſiſtencies which are neceſſarily implied in the doctrine of the conſtant conjunction of Motive and Action.

IT is incredible, that falſities and abſurdities, ſo groſs and palpable as thoſe which are demonſtrably implied in the doctrine of Neceſſity, as modified and aſſerted by Mr HUME, ſhould even for an hour have eſcaped the notice of men of ſenſe and men of ſcience, if there were not ſome circumſtance to conceal them from their view, or to withdraw their attention from them. A ſingle leaf, it has often been obſerved, may conceal an object, as effectually as a mountain could do. Such,

ch, I believe, has been the caſe in the eſent inſtance.

Philoſophers have always been more in- it on obſerving the points of analogy and emblance, (which are very numerous d very obvious), than on obſerving the ints of difference between the relation of otive and action and that of cauſe and ect in phyſics: Which is the very reverſe what they ſhould have done.

This diſpoſition in men of ſcience, and leed in all mankind, and the dangerous idency of it, and the neceſſity of guard- g againſt it, are well pointed out by BA- N, in the following aphoriſms of the *vum Organum.*

Intellectus humanus ex proprietate ſua fa- ſupponit majorem ordinem et æqualitatem rebus quam invenit : et cum multa ſint in tura, monodica, et plena imparitatis, tamen ingit parallela, et correſpondentia, et rela- a, quæ non ſunt. 1. 45.

Intellectus humanus in iis quæ ſemel placue- nt, (aut quia recepta ſunt et credita, aut quia

delectant), *alia etiam omnia trahit ad ſuffragationem, et conſenſum cum illis: et licet major ſit inſtantiarum vis et copia, quæ occurrunt in contrarium; tamen eas aut non obſervat, aut contemnit, aut diſtinguendo ſummovet et rejicit, non ſine magno et pernicioſo prejudicio, quo prioribus illis ſyllepſibus authoritas maneat inviolata.——At longe ſubtilius ſerpit hoc malum in philoſophiis et ſcientiis; in quibus quod ſemel placuit, reliqua, licet multo firmiora et potiora, inficit et in ordinem redigit. Quinetiam licet abfuerit ea, quam diximus, delectatio et vanitas, is tamen humano intellectui error eſt proprius et perpetuus, ut magis moveatur et excitetur affirmativis quam negativis; cum rite et ordine æquum ſe utrique præbere debeat; quin contra, in omni axiomate vero conſtituendo, major eſt vis inſtantiæ negativæ.* 1. 46.

Maximum et velut radicale diſcrimen ingeniorum quoad philoſophiam et ſcientias illud eſt; quod alia ingenia ſint fortiora et aptiora ad notandas rerum differentias; alia ad notandas rerum ſimilitudines. Ingenia enim conſtantia et acuta, figere contemplationes, et morari, et hærere in omni ſubtilitate differentiarum poſſunt: Ingenia autem ſublimia, et diſcurſiva, etiam tenuiſſimas et catholicas rerum ſimilitudines et agnoſcunt

agnoſcunt et componunt. Utrumque autem ingenium facile labitur in exceſſum, prenſando aut gradus rerum aut umbras. 1. 55.

Such being human nature, it ought not perhaps to be thought ſurpriſing, that ſo many philoſophers have been fond of dwelling on the reſemblance between the relation of motive and action and that of cauſe and effect in phyſics; and have been equally diſpoſed to overlook the difference between them. The unlucky metaphor of the balance, and the analogy between the turn of a balance when loaded with unequal weights in the oppoſite ſcales and the determinations of mankind between different motives, occurred to them; it pleaſed their fancy, engroſſed their attention, and has even come to be regarded by many as an important philoſophical axiom, which it is folly to call in queſtion. It may well be doubted, whether the doctrine of Neceſſity would ever have been maintained, had it not been for this analogy; and, but for it, we may be ſure that the doctrine of Neceſſity could not long have kept its ground. For whenever we loſe ſight of

the *mere turn* of the balance, and conſider more accurately all the obvious circumſtances of phyſical cauſes and effects, nay, even of the motion of a balance itſelf, we perceive at once, that the doctrine of Neceſſity is not more contrary to common ſenſe, than it is to the eſtabliſhed laws of the relation of cauſe and effect in phyſics.

The analogy of the balance muſt no doubt be obvious and ſtriking; for it has occurred, and has pleaſed almoſt univerſally. But the difference between the turn of a balance and the determination of our will, however difficult it may be to expreſs this difference in words in an unexceptionable manner, muſt be equally obvious to the apprehenſion even of the vulgar; as appears from their invincible repugnance to the doctrine of Neceſſity, which ſeems, at firſt ſight at leaſt, a fair inference from the analogy of the turn of the balance: Or if a few people ſhould be unreaſonable enough to diſregard that general repugnance, and to deny the inference from it, ſtill it muſt be ſelf-evident, that the difference between the turn of a balance

lance and the effects of phyſical cauſes is infinite. For the *mere turn* of a balance, though undoubtedly the effect of the greater weight, is not the whole effect, nor does it even bear any proportion to the whole effect, of that weight; which effect, in this argument, we aſſume as a principle, and indeed know experimentally, to be conſtantly conjoined with that weight. And if a balance were made, as ſurely may be conceived, without any reſiſtance to its turning, by diminiſhing friction, and making the centre of gravity of the whole machine coincide (phyſically) with the centre of motion, it would turn completely, from the horizontal to the vertical direction, with any the ſmalleſt addition or difference of weight at either end of the beam; and of courſe would be unfit for the common uſeful purpoſes of a balance, though it would afford a better illuſtration even than the common balance in favour of the doctrine of Neceſſity. Yet in reaſoning upon this favourite analogy, the ſmall circumſtance of the mere turn of the common balance, (without regard even to the degree or quantity of the turn), has alone been

been kept in view; while the whole effec of the weights in both ſcales ſeems neve to have been thought of, even by thoſ who admitted the conſtant conjunction c cauſe and effect, and who aſſerted the ſam with reſpect to motive and action.

It would no doubt be very fooliſh to ſ about proving, and perhaps will be thoug needleſs to attempt to illuſtrate, this poin of the difference between the mere turn c a balance and the full effect of the weigh in both ſcales, as no perſon of tolerabl capacity can fail to underſtand it at onc if he will attend to it even for a moment.

But it is worth while to point out, tha if a perſon ſhould be found of ſuch ſlen der capacity as to be incapable of under ſtanding it, or of ſuch a perverſe diſpoſi tion as to be unwilling to acknowledge it his caſe is by no means deſperate: ſo though he is doubtleſs infinitely beyon the reach of argument or reaſon, the poin in queſtion may be made very plain t him, without any thought or reaſoning a all. Such a perſon may be ſuppoſed t

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have all his bodily organs entire, and the full uſe of his five external ſenſes: truſting to theſe, I ſhould humbly propoſe, that, by way of beginning his ſtudies in phyſics, and acquiring ſome knowledge of the relation of cauſe and effect, he place himſelf under the deſcending ſcale of a common balance, when loaded with a thouſand pound weight in one ſcale, and a thouſand and ten pound in the other; and that the oppoſite weight be taken out of the ſcale by about ten pound at a time. I am confident, that by the time five hundred pound of it is taken out, he will feel diſtinctly, whether he can underſtand, or will acknowledge, or not, the difference between the turn of a balance and the full effect of a weight. And if he has any genius for analogy, he will eaſily extend the notion which he acquires in that way, to every other inſtance of cauſe and effect in phyſics, and of courſe to every inſtance of motive and action, if he either believes theſe two relations to be the ſame, or conceives that they both involve the circumſtance of conſtant conjunction.

SECT.

SECT. XIV.

Obſervations on an ancient paradox, with ſpect to the notion of Motive, founded the analogy between Agent and Motive, the ambiguity of common language.—A logy between it and the modern philoſop cal doctrine of Neceſſity.

THE philoſophical doctrine of Neceſſity of human actions, wh is a modern paradox, founded on the a logy between the relation of motive : that of phyſical cauſe, and rendered pl ſible, and difficult of detection, by the r taphorical and ambiguous phraſes of employed in ſpeaking of thoſe two r tions, may be in ſome meaſure illuſtra by a ſimilar inſtance of an ancient pa dox, with reſpect to the nature of moti founded on the analogy between the r tion of motive and that of agent, and r

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dered plauſible, or at leaſt tenable, by the ambiguity of many common phraſes, which literally expreſs the notion and the relation of agency, but are often uſed metaphorically in ſpeaking of motives and the relation of theſe to actions. At firſt view, we ſhould think it impoſſible that ſuch a confuſion of thought could ever be made, or ſuch an extravagant paradox ever be aſſerted, either by the moſt careleſs or by the moſt uncandid reaſoner. It appears, however, from a very curious epiſtle of SENECA, that there were philoſophers in ancient times, who maintained, that the virtues (which are confeſſedly motives or principles of action) were living creatures, and literally moved or impelled men to act in a certain way. SENECA ſtates the arguments in behalf of this ſtrange opinion very fully, and then reaſons againſt it at great length, half in jeſt, half in earneſt. As this abſurdity may have its uſe, and as it is very little known, I ſhall give a ſhort ſpecimen of the arguments on both ſides of it.

" *Animum conſtat animal eſſe, cum ipſe*

efficiat ut ſimus animalia, et cum ab illo animalia nomen hoc traxerint. Virtus autem nihil aliud eſt, quam animus quodammodo ſe habens: ergo animal eſt. Deinde, virtus agit aliquid: agi autem nihil ſine impetu poteſt: ſi impetum habet, qui nulli eſt niſi animali, animal eſt. Si animal eſt, inquit, virtus, habet ipſam virtutem. Quidni? habet ſeipſam. Quomodo ſapiens omnia per virtutem gerit, ſic virtus per ſe. Ergo, inquit, et omnes artes animalia ſunt, et omnia quæ cogitamus, quæque mente complectimur.——

Ego in alia eſſe me ſententia profeſſus ſum. Non enim tantum virtutes animalia erunt, ſi hoc recipitur; ſed oppoſita quoque illis vitia et affectus, tanquam ira, timor, luctus, ſuſpicio. Ultra res iſta procedet, omnes ſententiæ, omnes cogitationes animalia erunt: quod nullo modo recipiendum eſt. Non enim quicquid ab homine fit, homo eſt. Juſtitia quid eſt? inquit. Animus quodammodo ſe habens. Itaque ſi animus animal eſt, et juſtitia. Minime, hæc enim habitus animi eſt et quædam vis. Idem animus in varias figuras convertitur, et non toties animal aliud eſt, quoties aliud facit: nec illud quod fit ab animo, animal eſt. Si juſtitia

juſtitia animal eſt, ſi fortitudo, ſi cæteræ virtutes: utrum deſinunt animalia eſſe ſubinde, ac rurſus incipiunt, an ſemper ſunt?" &c. &c.

SENECA, Epiſt. 113. *paſſim.*

There can be no occaſion to enter into the merits of this ſtrange controverſy. I preſume, if any perſon in the preſent age were to aſſert the opinion which SENECA combats ſo acutely, he would inſtantly be pronounced inſane; and probably there would not be a much more favourable opinion entertained of the judgement of one who ſhould ſet about arguing againſt it. Yet let it be obſerved, that it is a ſpeculation or ſyſtem that correſponds perfectly to the modern doctrine of the Neceſſity of human actions; both in principle, which conſiſts in the confounding the notions of two different natural relations; and in the ſtyle of reaſoning, which conſiſts in drawing inferences from the words and phraſes commonly employed in a metaphorical ſenſe in ſpeaking of motives and actions, juſt as if they were literal expreſſions of thought. It is unneceſſary

to make any compariſon between the two doctrines in point of rationality: ſome, no doubt, will think the difference very great, others very little. But whichever of them be the more plauſible, I have no ſcruple to ſay, that the ancient ſyſtem is by far the more tenable. Indeed (all regard to common ſenſe, and even to conſciouſneſs, being put out of the queſtion, as in candour it ought to be) I ſee no means of confuting a philoſopher, who ſhall chuſe to deny having any ſelf-governing power with reſpect to his own actions, and to aſſert, at the ſame time, that they are abſolutely, and as to him irreſiſtibly, determined and produced by certain motives or principles of action, which are animals, and *act* upon him only occaſionally, or when they pleaſe. I am ſure ſuch a doctrine is proof againſt mathematical demonſtration, or, more properly ſpeaking, is beyond the reach of it. Mathematical demonſtration, I apprehend, is only applicable to this ſubject on the ſuppoſition, that the living perſon, or mind, is as inert with reſpect to the production of any change in itſelf, as inanimate matter

ter is; and that the motives producing change in it are alſo things inanimate, which, whether conſtantly conjoined with their reſpective actions, or occaſionally ſeparated from them, have no power of their own, either of not acting, or of acting according to their diſcretion. I own I ſhould ſuſpect, that thoſe philoſophers whom SENECA undertakes to confute, and takes the liberty to laugh at, had given up their fortreſs, or rather abandoned it, becauſe no body thought it worth while to attack them in it; for it is one of that kind, which a ſucceſſion of reſolute diſputants might eaſily maintain againſt all mankind, even to the day of judgement.

SECT.

SECT. XV.

General illuſtration and confirmation of reaſonings in the nine preceding ſectic from Sir ISAAC NEWTON'S *reaſonings his* Principia.—*Commentary on his arg ment in proof of his firſt corollary from three laws of Motion.—That corollary argument reſolvable into the principle* Inertia *of the ſubject, and conſtant c junction of Cauſe and Effect, or into latter principle ſingly, as it implies the j mer.—Impoſſibility of aſſigning a rea conſiſtent with the principles, for the c ferent reſult, in the caſe of lifeleſs bod and in that of living perſons.—Abſurd of ſuch an attempt.—Either the inferen muſt be admitted, or the latter princ muſt be given up, with reſpect to Moti and Actions.*

I Believe the moſt ſatisfactory and m uſeful method of illuſtrating and eſ bliſhing the kind of mathematical reaſc

ing that has been employed to refute the doctrine of the Neceſſity of human actions as modified by Mr HUME, and maintained to conſiſt in the *conſtant conjunction* of motive and action, at leaſt with men who are accuſtomed to ſcientific reaſoning, will be, to analyſe NEWTON's firſt corollary from the three laws of motion, with his argument in proof of it. For it will appear at once, that his argument turns entirely on the *conſtant conjunction* of cauſe and effect, and on the *inability* of the body to move itſelf. This laſt circumſtance, which is comprehended in what NEWTON calls the *inertia* of body, is indeed ſufficiently implied in the former, though this is not mutual; and the correſponding principle is equally implied with reſpect to mind, or living perſons, in the doctrine of the *conſtant conjunction* of motives and actions, as was formerly mentioned; and, at any rate, it is expreſsly aſſerted in every doctrine of the Neceſſity of human actions as proceeding from motives, like phyſical effects from their cauſes, and is an eſſential part of every ſuch doctrine, and ſeems to be the very point in diſpute between

tween philoſophers and the vulgar on this ſubject.

NEWTON's firſt corollary from the three laws of motion is as follows: *Corpus viribus conjunctis diagonalem parallelogrammi eodem tempore deſcribere, quo latera ſeparatis.*

This corollary evidently conſiſts of two parts or points, and conſequently might have been expreſſed in two ſeparate propoſitions.

The firſt point is, That the body muſt move in the diagonal of the parallelogram ſuppoſed.

The ſecond point is, That it muſt deſcribe the whole diagonal in the ſame time that it would have deſcribed either of the two contiguous ſides of the parallelogram ſeparately.

The ſecond point I put out of the queſtion here; becauſe, for reaſons formerly mentioned, it is not indifferent to a perſon

ſon to go, as it is for a body moving unreſiſted, or uniformly reſiſted, to move with any velocity. But if this were the caſe with a perſon, there can be no doubt that the whole of NEWTON's corollary would, on the principle of *conſtant conjunction*, apply to a living perſon under the influence of combined motives, as well as to a dead body under the influence of ſimilarly combined forces, or phyſical cauſes of motion.

It is therefore the firſt point only of the corollary that I have occaſion to conſider at preſent. NEWTON's argument in proof of his whole corollary is as follows: *Si corpus dato tempore, vi ſolâ M in loco A impreſſâ, ferretur uniformi cum motu ab A ad B; et vi ſolâ N in eodem loco impreſſâ, ferretur ab A ad C: compleatur parallelogrammum A B D C, et vi utrâque feretur corpus illud eodem tempore in diagonali ab A ad D. Nam quoniam vis N agit ſecundum lineam A C ipſi B D parallelam, hæc vis per legem ſecundam nihil mutabit velocitatem accedendi ad lineam illam B D, a vi altera genitam. Accedet igitur corpus eodem tempore ad lineam*

B D, ſive vis N imprimatur, ſive non; atque ideo in fine illius temporis reperietur alicubi in linea illa B D. Eodem argumento in fine temporis ejuſdem reperietur alicubi in linea C D, et idcirco in utriuſque lineæ concurſu D reperiri neceſſe eſt. Perget autem motu rectilineo ab A ad D per legem primam.

This important argument is one of the plaineſt and ſimpleſt that can be conceived, and ſuch as I am perſuaded a child of ſeven years of age would eaſily underſtand. It is in ſubſtance merely this: That while the body, in conſequence of one cauſe, is moving, or tending to move, in the direction of one of the contiguous ſides of the parallelogram, in conſequence of the other cauſe, it is tending to move in the direction of the other contiguous ſide of it. It ſeems tacitly to be taken for granted by NEWTON, that the body *muſt* be in ſome place, and that it cannot be in two places, nor be moving in two different lines, at once; which it may be preſumed no perſon will diſpute; and therefore, that at any moment of the time in

in which it is moving, it *muſt* be found in ſome point of a line lying in the intermediate direction between the two in each of which it tends to move: the preciſe line of this motion being determined by thoſe of the other two, which would have taken place if the reſpective cauſes of them had been applied ſingly.

The merit of the reaſoning employed by NEWTON, in proof of his corollary, muſt depend on the thoughts expreſſed by his words employed in enunciating it, and not upon the words themſelves; elſe the corollary, though true in Latin, might be falſe in Greek or in Engliſh; which is abſurd.

Let us then conſider accurately the import of his words, and obſerve which of the many circumſtances expreſſed by them are eſſential to the force of his argument in proof of the compoſition of motion.

1. *Corpus*, a Body; a Being, extended, figured, ſolid, diviſible, moveable, unintelligent,

telligent, inert, that is, incapable either of changing its own ſtate, or of preventing it from changing, in conſequence of any cauſe applied.

Take away, or, what is the ſame thing for our preſent purpoſe, put out of conſideration, extenſion, figure, ſolidity, and diviſibility; ſuppoſe the body a mere atom, or an indiviſible moveable point: NEWTON's argument remains unſhaken.

Suppoſe the atom, or the extended, figured, ſolid body, to have intelligence: or, if this be thought an abſurd or extravagant ſuppoſition, ſuppoſe a very intelligent man, with all his ſenſes about him, but perfectly paralytic, or bound hand and foot, ſo as to be unable to give himſelf the ſmalleſt motion, or to prevent himſelf from moving, by laying hold of any thing, to be placed in the ſame circumſtances with the *body* in NEWTON's firſt corollary: NEWTON's argument ſtill applies in full force to ſuch a Being; and whenever the experiment is tried, or any one equivalent to it, as in the caſe of a perſon

perſon in a ſwinging chair or bed, the reſult is ſtrictly agreeable to the corollary.

But let us next ſuppoſe the Being in queſtion, whether extended, figured, ſolid, and diviſible, or only a ſhapeleſs atom, whether intelligent or ſenſeleſs, to be capable of moving of itſelf.

NEWTON's argument does not apply at all to ſuch a Being: for, inſtead of going in the direction of the diagonal, it may go in the very oppoſite, or in twenty different directions ſucceſſively. It may go backwards and forwards; it may move in a circle, or deſcribe a ſpiral or a regular polygon; and this notwithſtanding the two forces applied.

It may be proper here to remark, that motion, the *effect of one cauſe*, is always, and, as we have reaſon to think, neceſſarily. rectilinear, progreſſive, and uniform in its velocity: but motion, the *action of one agent*, may be either progreſſive or retrograde, or each alternately; it may be

be uniform, or accelerated, or retarded, or all ſucceſſively; it may be either rectilinear, or curvilinear, or each in their turns. The acceleration of the motion of a falling body, the oſcillatory motions of pendulums, and many other ſuch inſtances, which at firſt view might appear contradictions to the alledged uniformity of motion, the effect of one cauſe, will not be found ſo when duly examined.

2. *Vires*, Forces, or cauſes of motion. In NEWTON's reaſonings, commonly nothing more is meant by forces than merely certain tendencies to move; and this he is at much pains to inculcate, even in his definitions. But the term is often uſed to denote the ſuppoſed cauſes of ſuch tendencies to move; as in the preſent argument; which produces no embarraſſment, nor even ambiguity, as the cauſe and its effect, the tendency, are conceived to be conſtantly conjoined. If this were not uniformly conceived to be the caſe, the uſe of ſuch a term, that is really ambiguous, would produce the greateſt confuſion, and would completely mar his whole

whole reaſonings. The nature of theſe cauſes NEWTON did not ſpecify, and in the *Principia* he frequently warns us, that he did not know it: nor indeed was it of any conſequence to him, in his mode of reaſoning, of what nature the cauſes of motion were, provided only they were conſtantly conjoined with their effects. That this circumſtance was always implied in NEWTON's conception of them, and that it is eſſentially neceſſary to his argument in proof of his firſt corollary, is very evident. Suppoſe, in the caſe put in that corollary, that one of the forces ſhould be ſeparated from its effect, then the body, inſtead of moving in the diagonal, *muſt* move in the direction of one or other of the two contiguous ſides of the parallelogram. Suppoſe both the forces to be ſeparated from their effects, the body, inſtead of deſcribing the diagonal, *muſt* remain at reſt at the point where it was originally placed.

Even the clauſe in NEWTON's argument, *Nam quoniam vis N agit ſecundum lineam A C ipſi B D parallelam, hæc vis per legem*

legem ſecundam nihil mutabit velocitatem accedendi ad lineam illam B D a vi alterâ genitam, is implied in the notion of the conſtant conjunction of cauſe and effect, is reſolveable into it, and is in truth little elſe than a particular mode of expreſſing it, adapted to the caſe in queſtion.

Without inquiring minutely into the extenſive and various meanings of the verb *agit*, and conſequently the ambiguity of it in certain caſes, we may ſafely ſay, that, as here employed by NEWTON, it means merely *is the cauſe of motion*; and that the ſenſe of the paſſage would be exactly expreſſed in the following words: *Quoniam vis N eſt cauſa motus ſecundum A C, hæc vis non erit cauſa ullius mutationis velocitatis accedendi ad B D.* For *muto*, as being an active verb, as well as *ago*, according to its full literal meaning, involves and expreſſes a notion of ſomething different from merely being a phyſical cauſe of change, and ſomething different from what NEWTON was reaſoning about, or ſeems to have had in view in this argument.

Such

Such being the meaning of the clauſe at preſent under conſideration, it may eaſily be ſhewn, that it is fully implied in the notion of the conſtant conjunction of cauſe and effect; or, in other words, it may be demonſtrated from this principle.

For, according to the hypotheſis, or caſe put in the corollary, no cauſes are applied to the body, but M and N. Uniform motion, with a certain velocity in the direction A B, is the full effect of M when applied ſingly; and uniform motion, with a certain velocity in the direction A C, is the full effect of N when applied ſingly. If, then, when both M and N are applied together, the velocity of the motion of the body, either in the direction A B, or in the direction A C, is either encreaſed or diminiſhed, this change, which we conſider as an effect, muſt either take place without a cauſe, or it muſt proceed either from M or N, the only two cauſes that are applied. If it be ſaid to take place without a cauſe, it is a ſpecific inſtance of the ſeparation of cauſe and effect, as much as the application of a cauſe which ſhould

not be followed by its proper effect would be. If it be ſaid to be the effect of M, or of N, it muſt be either over and above their uſual full effect when each of them is applied ſingly; or it muſt be either wholly or partly, inſtead of their uſual full effect. If it be over and above the uſual full effect of them reſpectively, then they are not conſtantly conjoined with their effects, having a greater effect at one time than at another; and the amount of the difference between the effect of either of them, when applied ſingly, and when applied in combination with the other, is the quantity of effect from which at one or other of thoſe times it was ſeparated. For the ſake of conciſeneſs and diſtinctneſs, this may be expreſſed in algebraical form, as follows:

$$X \equiv A,$$
$$Y \equiv B,$$
$$X \curlywedge Y \equiv A \curlywedge B,$$

according to the aſſumed principle of conſtant conjunction:

But

But if it be ſuppoſed to be

$$X \curlywedge Y \equiv \underline{A + C} \curlywedge B,$$

or if it be ſuppoſed to be

$$X \curlywedge Y \equiv A \curlywedge \underline{B - D},$$

then C or D are the quantities of effect ſeparated at one time or another from the cauſes X and Y.

If it be ſaid, that this new effect is not additional, or over and above the uſual full effect of either cauſe ſingly applied, but either wholly or partly, inſtead of that uſual effect, ſtill it would be an inſtance of the ſeparation, either total or partial, of a cauſe from its effect; for even if the quantity of the new effect were the ſame with that of the old, the quality or kind of it would be different. But while the body advances towards B D with the ſame velocity as if N were not applied, and towards C D, with the ſame velocity as if M were not applied; and accordingly at the end of the given time

is found, at the point D, the difference from the effect of M corresponds exactly both in quantity and quality, to the full effect of N; as the difference from the effect of N applied singly does to the full effect of M; so that both causes are fully conjoined, both in respect of quantity and quality with their respective effects.

The case of the direct concurrence or direct opposition of forces or causes of motion is more familiar to us than the combination of them, or at least is more readily and clearly apprehended on account of its perfect analogy with the simple operation of addition and subtraction in arithmetic or in algebra. It may therefore be used to illustrate the preceding argument with respect to the combination of forces as the same general principle applies to them all.

If a force or cause of motion X produced a velocity as A, and another force Y produced a velocity as B, on the principle of constant conjunction, the concurrence of X and Y must produce a velocity as

A + B,

A + B, and the oppoſition of them would give a velocity as A — B. To ſuppoſe X + Y to produce a velocity as A + B — C, or as A + 2 B, or to ſuppoſe X — Y to produce a velocity as 2 A + B, or as A + B + C, would at once be acknowledged to be an extravagancy, or little better than an abſurdity; and, on examination, it would be ſeen, that on thoſe ſuppoſitions there muſt be ſometimes an effect without a cauſe, or elſe cauſes ſeparated from their full uſual effects.

If the principle of conſtant conjunction be conceived to make a part of the relation of cauſe and effect, they are complete abſurdities, as hath been already ſhewn. And ſo univerſal and irreſiſtible is that notion of the relation in queſtion, that if thoſe ſuppoſitions were expreſſed in arithmetical numbers, and explained by any familiar illuſtration, ſuch as ſailing, either againſt or with a current, any ordinary man would be ſtruck with the abſurdity of them. A common ſeaman, I preſume, would ſee at once the abſurdity of them in all the three caſes of concurrence, oppoſition,

oppoſition, or combination.——Let it be remembered, however, that theſe reaſonings are given merely as neceſſary inferences from the principle of conſtant conjunction of cauſe and effect, not as any proof of the neceſſity of that conſtant conjunction, nor even of the truth of it, as a mere matter of fact; though no doubt they indirectly tend to prove the truth of it, as they themſelves are found true as matters of fact. The nature of the relation, in other reſpects, is a rational ſubject for further inveſtigation.

Call one of the forces, to which NEWTON's argument relates, Gravity, and the other Magnetiſm or Electricity; or one of them Hunger, and the other Thirſt; or one of them Anger, and the other Fear; or one of them the deſire of earning 100 guineas, and the other the deſire of earning 50 guineas; or, what is much better for the purpoſe of preciſe reaſoning, call one of them M, and the other N, as NEWTON does in his argument in proof of the firſt corollary; ſtill, if their conjunction with their effects be conſtant, NEWTON's

TON's argument applies to them completely.

It has often been obſerved, and I believe is now univerſally acknowledged, that NEWTON's argument in proof of that important corollary, is no demonſtration. Indeed he himſelf does not give it formally as a demonſtration, though it is very plain, that he relied on it as being eſſentially a perfect one. In both theſe reſpects, I apprehend, he was clearly in the right. The argument is deficient in the form; but it has completely the eſſence of a demonſtration. It is deficient in this reſpect, that the concluſion is not clearly reſolved into all the ſimpler principles that are aſſumed in the reaſoning, whether theſe be ſelf-evident neceſſary truths, or axioms, or only ultimate phyſical facts or laws of Nature. Of the former kind are the neceſſity of a body's being in ſome place, and the impoſſibility of its being in two places, or moving in two different lines, at once: of the latter kind are the conſtant conjunction of cauſe and effect, and the inability of the body to move itſelf.

ſelf. But this indeed is virtually implied in the firſt law of motion; and both the conſtant conjunction of cauſe and effect, and the inability of a body to move itſelf, are implied in the common notions of *cauſe* and of body. Yet NEWTON's argument is eſſentially good demonſtration; for all theſe ſimple truths, whether neceſſary or contingent, are univerſally implied in the notions of mankind concerning thoſe things about which he reaſons; and they would be expreſſed in good definitions of thoſe notions, or explanations of the terms, which he, like other men, employs to denote them. This ſeems to have been very uniformly felt and underſtood by men of ſcience, who have almoſt univerſally acquieſced in NEWTON's argument. None indeed could call in queſtion the truth of the concluſion as a matter of fact; for there is neither obſcurity, nor difficulty, nor contradiction, in the experiments that confirm it; but a few have inclined to refuſe their aſſent to the corollary as a point demonſtrated, or a neceſſary truth; but theſe, I believe, have been men who, from the force of old prejudi-

ces,

ces, could not, or would not underſtand it. As every demonſtration muſt ultimately reſt on ſome firſt principles; as no more principles ſhould be aſſumed for any demonſtration than what are eſſentially and abſolutely neceſſary for it; as it is always pleaſing, and indeed for other reaſons deſirable, to reſolve a demonſtration into as few principles as poſſible; and as nothing more is wanting to complete the demonſtration of NEWTON's corollary, but merely to ſpecify thoſe circumſtances which are tacitly aſſumed by him, and are implied in his argument; I hope I ſhall not be accuſed of arrogance when I ſay, that I conceive this little commentary to be a demonſtration of his firſt corollary, and of the neceſſary compoſition of motion, from a combination of forces, neither directly concurring, nor yet directly oppoſing one another: and the ſame principles apply to all other caſes of motion from the various applications of any cauſes or forces, whether concurring or oppoſing.

In ſhort, grant him but the *inertia* of body, and the *conſtant conjunction* of cauſe

and effect, the neceſſity of a body's being in ſome place, and the evident impoſſibility of its being in two places, or moving in two different lines, at once; which are all of them axioms of phyſics, or laws of human thought, with reſpect to body, ſpace, motion, cauſe, and effect, as much as the axioms of geometry are laws of human thought with reſpect to quantity; and NEWTON's corollary with reſpect to the compoſition of motion is plain demonſtration: take away any one of theſe things, or diſprove any one of theſe ſuppoſed phyſical axioms, and the *Principia* of NEWTON do not deſerve the name of reaſoning.

The two laſt of theſe things are univerſally admitted with reſpect to living perſons, as well as with reſpect to inanimate bodies: nor can they, without the moſt palpable abſurdity, be denied. The two firſt of them are alſo maintained with reſpect to living perſons, as well as to inanimate bodies, in the philoſophical doctrine of the neceſſity of human actions, as it has been modified and aſſerted by Mr

Mr HUME: and the ſame conſequences *muſt* neceſſarily follow from them.

This diſquiſition, therefore, I give as complete demonſtration, not merely of the falſity, but of the abſurdity, of the doctrine of the conſtant conjunction of motive and action, and of the neceſſity of human actions as reſulting from this relation between them and the motives of them, and of the perfect reſemblance or identity of the relation of motive and action with that of cauſe and effect in phyſics.

If any perſon will not acquieſce in my demonſtration, and give up Mr HUME's doctrine, he has his choice of two things which he may do. He *muſt* either admit as truths all my concluſions from that doctrine, and ten thouſand others, equally falſe, and more ridiculous, that may be drawn from it; or he *muſt* ſhew ſome error in the reaſoning employed, which in truth is not mine, but Sir ISAAC NEWTON's. I only analyſe it, and make a new application of it. He *muſt* likewiſe find means

to diſprove, or at leaſt *muſt* be prepared to deny, and argue againſt, many of the beſt known and moſt important facts in phyſics.

For it is neceſſary to point out, that nothing can ever be done towards evading or explaining away thoſe falſe and ridiculous concluſions that have been drawn from the doctrine of the conſtant conjunction of motive and action, by aſſigning a reaſon, conſiſtent with the principle, for the ſtriking difference of the reſult of it in the caſe of living perſons, and in that of inanimate bodies.

I have no doubt but that, by the help of ambiguous words, and groundleſs, or perhaps unintelligible hypotheſes, arguments, or talk at leaſt, may be muſtered up, even on the plaineſt ſubject, which it will be impoſſible either to underſtand or to anſwer. But to ſeek for ſuch a reaſon in the preſent caſe, is an abſurdity; for, from the nature of things, there *can be none ſuch*: and it is folly to liſten to any thing that can be ſaid in favour of ſuch an

an opinion. This point, which is of ſome conſequence, it would be tedious to explain in general terms; but this kind of explanation of it is not needed, as it may be ſufficiently proved and illuſtrated by one or two inſtances.

If a mathematician ſhould aſſert, that he had conſtructed a plain triangle of ſuch curious proportions, that one ſide of it was longer than the other two put together, and that the three angles of it were greater than two right angles; and ſhould undertake to aſſign a reaſon for theſe differences between his triangle and all others, and even offer to demonſtrate theſe ſtrange properties of his triangle: What would men of ſenſe and men of ſcience think of him?

Or if a chemiſt ſhould tell us, that he had diſcovered a new foſſil, or contrived a new compoſition of metals, of ſuch wonderful properties, that though it was perfectly inert, and very ponderous, yet a ball of it, when projected obliquely to the horizon, went in a ſtraight line, and with

an

an uniform velocity, till the whole force of projection was ſpent; and that then it fell to the ground, with a retarded, or with an uniform velocity; and ſhould undertake to aſſign a reaſon for theſe ſingular properties in his new metal: What ſhould we think of ſuch a chemiſt?

It is plain, that both the mathematician and the chemiſt muſt be mad, and that they would be undertaking abſurdities: and it would be abſurd to liſten to them, unleſs from curioſity to know what ſpecies of inſanity poſſeſſed them, or with the charitable intention of miniſtering to their relief. For if the human faculties may be truſted in any caſe, we may be ſure, that Omnipotence itſelf does not extend to ſuch undertakings as theirs. And if the moſt ingenious of men will nevertheleſs make ſuch attempts, by all their ingenuity and all their labours, they can do no more than demonſtrate their own inſanity.

The triangle may be any thing that a triangle can be; equilateral, iſoſceles, or ſcalene; right angled, acute angled, or obtuſe

obtuſe angled; of any ſize, of any proportion, or lying in any plane; ſtill, if it is a plane figure, bounded by three right lines, any one of theſe lines *muſt* be leſs than the other two taken together, and the three angles of it *muſt* be equal to two right angles.

The metal may be any thing that a body can be; nay more, it may be every thing that mind can be, except that one thing which is excluded by the fundamental principle of the doctrine of Neceſſity: the ball made of it may be ſolid or hollow, hard or ſoft, rough or ſmooth, big or little, hot or cold, black or white, or party-coloured, and of any ſhape; it may be ſuppoſed to have all the piety of *David*, and all the wiſdom of *Solomon*; all the virtues of *Socrates*, or all the vices of *Nero*; all the poetical genius of *Homer*, or all the philoſophical knowledge of *Newton*: ſtill, if it is inert, and heavy, and projected obliquely to the horizon, and if the conjunction of cauſe and effect be conſtant, it *muſt* deſcribe a curve, and fall with an accelerated velocity.

Now,

Now, according to Mr HUME's doctrine of the Neceſſity of human actions, and the *conſtant conjunction* of motives and actions, a living perſon in relation to motives and actions is preciſely in the ſituation of an inanimate body in relation to projection and gravity, or to any other phyſical cauſes: and if that doctrine be juſt, the ſame general reſult, to wit, the conſtant compoſition of actions (for inſtance, of voluntary movement conſidered as an action) from the combination of motives, as being a ſtrictly neceſſary inference from thoſe principles, without the ſmalleſt regard to any other properties in the ſubject or perſon, or to any other circumſtances whatever, *muſt univerſally* take place, like the compoſition of motion from the combination of forces in phyſics; all idle talk to the contrary notwithſtanding.

SECT.

SECT. XVI.

Second part of the Dilemma ſtated.—The inertia of Mind.—Irreſiſtible influence of Motives which are not conſtantly conjoined with their reſpective Actions or Effects, but occaſionally ſeparated from them.—Repugnance of this occaſional ſeparation or conjunction to the aſſumed principle, That every Event or Change is an Effect implying a Cauſe.—Impoſſibility of its proceeding from any Cauſe conſtantly conjoined with its Effect.—Neceſſity of its either coming to paſs without any Cauſe, and purely by chance, or elſe being produced by an Agent having optional or diſcretionary power to ſeparate or to conjoin Motives and Actions.—Suppoſition of its coming to paſs without any Cauſe ſtated, and conſidered on the principle of the doctrine of Chances.—Neceſſary inferences from it, that are falſe, and repugnant to the univerſal notion of the relation of Motive and Action.

AS it is an unqueſtioned axiom of logic, That a propoſition directly contradictory to one that is falſe, muſt be

true; and as it appears from the preceding obſervations and reaſonings, that the doctrine of the *conſtant conjunction* of motive and action is not merely falſe, but abſurd; it muſt be admitted, that whatever the relation in queſtion may be in other reſpects, it is only an *occaſional and ſeparable connection.* And this concluſion, I believe, is perfectly conſiſtent with the general and natural conviction, or what is called the common ſenſe, of mankind.

Still, however, it may be aſſerted, and probably it will be aſſerted by thoſe who are keen partiſans of the doctrine of philoſophical neceſſity, that though the connection of motive and action is but occaſional and ſeparable, the volitions and actions of men are abſolutely determined and produced by motives, as phyſical effects in inanimate matter are by their cauſes; and that men have no independent power of reſiſting motives, or of acting, except merely as impelled by them.

Such we may reaſonably ſuppoſe to have been the perſuaſion of philoſophers who main-

maintained the doctrine of Neceſſity before the time of Mr HUME; who, ſo far as I know, was the firſt that clearly and explicitly maintained the doctrine of the conſtant conjunction of motive and action, and made this principle the foundation of the neceſſity of human actions. It is very plain, at leaſt, that Mr HUME regarded himſelf as the author of that doctrine, and that he conſidered it as an important diſcovery in ſcience.

This doctrine, which, in contradiſtinction to Mr HUME's, may be called the old or common doctrine of Neceſſity, is as repugnant to general belief, or common ſenſe, as Mr HUME's is; and, what is more to the preſent purpoſe, like his doctrine of Neceſſity, it may be demonſtrated mathematically to be falſe and abſurd. For though theſe two doctrines are very different in one reſpect, yet, upon the whole, they are very near akin; and as they both involve the ſame falſe principle, to wit, the *inertia* of mind, the ſame mode of reaſoning, with only a few very ſlight alterations, may be applied to both, and

will be ſufficient to prove, that the common doctrine of Neceſſity, as well as Mr HUME's, muſt be falſe, becauſe its neceſſary conſequences are inconſiſtent with plain matter of fact; and that it muſt be abſurd, becauſe it is inconſiſtent with itſelf.

It appears to me, I confeſs, that this old or common doctrine cannot be maintained with near ſo much plauſibility as Mr HUME's doctrine of Neceſſity; that it is liable to many peculiar objections, as well as to moſt or all of thoſe to which his is liable; and therefore, that though it might be refuted by itſelf, without regard to his, yet the refutation of it is effectually involved in that of Mr HUME's. And this was one reaſon for conſidering ſo minutely the principle of conſtant conjunction, and illuſtrating the conſequences of it at ſo great length.

The doctrine now to be conſidered, and purſued to ſome of its neceſſary conſequences, is, "That men cannot act, except as impelled by motives, nor avoid "acting

"acting as they are impelled by motives; "which motives are *not conſtantly conjoin-* "*ed* with the actions to which they "prompt."

This doctrine it may be proper to conſider, firſt, in its moſt ſimple form, and without any of thoſe modifications and additions which the ingenuity of philoſophers has contrived to obviate or palliate ſome of its moſt ſtriking defects, and which modifications are now generally conceived to make an eſſential part of it.

One of the moſt obvious difficulties that occurs with reſpect to this doctrine, is the ſtriking inconſiſtence of it with what ſeems to be aſſumed as the fundamental principle of every doctrine of Neceſſity, to wit, that every event or occurrence, even the voluntary action of a living creature, is to be regarded as an effect implying a cauſe; that is, ſtanding in the very ſame relation to ſomething elſe, that any phyſical effect ſtands in to its cauſe; for inſtance, motion

to

to impulſe; or expanſion, or fuſion, or evaporation, to heat.

The conjunction of two things which were ſeparated, or the ſeparation of two things which were conjoined, at other times, is plainly a kind of *Event:* as, for example, drunkenneſs, from the drinking of pure ſpring water; or motion in the particles of lead, or of wood, from the approach of a magnet; or a ſtone ſometimes ceaſing to gravitate or tend to the earth; or a ſnow-ball ſometimes not melting as uſual in a fire: and ſuch an *event*, according to the fundamental principle aſſumed, muſt be an *Effect*, implying a *Cauſe*. But then this cauſe muſt either be conſtant in its influence, or not conſtant. If it is conſtant, the occaſional ſeparation and conjunction ſtated in the hypotheſis in queſtion is impoſſible. If it is not conſtant in its influence, then according to the fundamental principle aſſumed, there muſt be a cauſe for its ſometimes having effect, and ſometimes not having effect; and ſo on, *ad infinitum*.

But

But it is ſurely unneceſſary to enlarge on this point; as it muſt be ſelf-evident to every perſon who conſiders it even for a moment, that if the conjunction of motive and action be only occaſional, it cannot depend on a cauſe whoſe effect is uniform and conſtant; and therefore, that motives and actions muſt either be ſometimes conjoined, and ſometimes ſeparated, without any influence of a cauſe, or any operation of a voluntary agent, or Being who poſſeſſes ſome kind of optional or diſcretionary power; that is, purely and ſtrictly by chance; or elſe that there muſt be an optional or diſcretionary power lodged ſomewhere, of conjoining or ſeparating them. Such a power common ſenſe tells us, that we ourſelves poſſeſs; and it may fairly be preſumed, that if it had been conſiſtent with the ſpeculations of the aſſertors of the doctrine of Neceſſity to allow the poſſibility of it any where, they would have taken it to themſelves, at leaſt as willingly as they would have allowed it to any other Beings.

Since, then, the ſuppoſition of the influence

fluence of a cauſe whoſe effect is conſtant and uniform, is inconſiſtent with the hypotheſis of the occaſional conjunction of motive and action; and the ſuppoſition of an optional or diſcretionary power of ſometimes conjoining and ſometimes ſeparating them, is inconſiſtent with the fundamental principle of Neceſſity; there remains no other ſuppoſition, but that motives and actions are occaſionally conjoined or ſeparated merely by chance, without either a cauſe, or the interference of a voluntary free agent.

This laſt ſuppoſition, which is alſo palpably inconſiſtent with the aſſumed fundamental principle of the doctrine of Neceſſity, to wit, that every *event* is an *effect* implying a cauſe, will to many appear too extravagant and fooliſh to merit any diſcuſſion; yet perhaps it may not be amiſs juſt to point out one plain inference from it, contraſted with the correſponding inference from the doctrine of conſtant conjunction. On the latter ſuppoſition, it is demonſtrably impoſſible for men to play at cheſs:—on the former ſuppoſition, it is demon-

demonſtrable, that chefs muſt be a game of chance, more purely even than hazard is. And the ſame may be ſaid with reſpect to the whole game of human life, which in many reſpects reſembles very much a game at chefs.

On moſt other ſubjects, perhaps on every other but the very one at preſent under conſideration, ſo ſtriking a repugnance of any doctrine to plain matter of fact, would be regarded as ſufficient proof of its falſity; and ſuch an inconſiſtency of any doctrine with itſelf, or of one part of it with another, would be regarded as evidence of its abſurdity: nor does there appear any good reaſon why the caſe ſhould be different with reſpect to this ſubject. But as the doctrine of Neceſſity has long been allowed to have a peculiar privilege of withſtanding all uſual kinds of philoſophical evidence, it may be uſeful to proſecute the inquiry ſtill farther, to ſome more particular conſequences, which may be brought to the teſt, either of ſtrict mathematical demonſtration, or of ſome more ſimple, open, unequivocal experiments,

than either a game at chefs, or the general conduct of human life.

Admitting, then, that men cannot act except merely as impelled by motives; and that motives are but ſometimes conjoined with their reſpective actions, and ſometimes ſeparated from them; and ſetting aſide all inquiries concerning the manner in which this comes to paſs; it might ſtill be a very rational and pertinent queſtion to aſk, How often are they conjoined, and how often are they ſeparated? or, What proportion does the frequency of the conjunction bear to that of the ſeparation of motive and action?

This queſtion perhaps it will be found difficult to anſwer with great accuracy; but luckily this is not required for the preſent purpoſe. Conſidering that there are generally two or three, and often twenty or thirty, different motives to chuſe among, only one of which can be conjoined with its proper action; it might not be unreaſonable to ſuppoſe, that the ſeparation happens at leaſt three or four times

as

as often as the conjunction. But, for the ſake of eaſy calculation, we may aſſume as the proportion of the frequency of the conjunction and the ſeparation of motive and action, that of equality, and ſuppoſe them conjoined juſt as often as they are ſeparated.

Then it follows neceſſarily, that if 100 needy porters were offered 100 guineas each, on condition that they ſhould carry as many letters but 100 yards, only about fifty of them would be moved to do the work required, and the reſt would remain idle, or waiting for their chance of their ordinary employment. Nay, if 100,000 men had wanted food for three days, and were on the point of ſtarving, (and ſuch ſituations are not imaginary, for they have occurred often in the courſe of warfare); and if plenty of good food were ſet before them, and they themſelves were left at full liberty, only about 50,000 of them would eat, and the remainder, not from any motive, but for want of an effectual one, that is, one conjoined with its action, would not eat, but would die of

hunger, with plenty of food within their reach.

If the ſuppoſition of the ſeparation of motive and action being as frequent as the conjunction of them ſhall be deemed unreaſonable, let us ſuppoſe the ſeparation of them to happen but once in a million of times. Then to be ſure, if the experiment ſuggeſted were fairly tried on a million of needy porters, or on a million of hungry ſoldiers, only about one of each million would remain inactive, while all the reſt would earn their money, and eat their meat. But it will probably be thought by many, that even that one of each million would be one more than would be found to act, or rather to remain inactive, in ſo abſurd a manner. However, that we may not be thought too ſcrupulous on ſuch an occaſion, we may allow the concluſion in queſtion to paſs as a truth.

But then it will ſurely be allowable, and even proper, to vary a little the circumſtances of the experiment, that we may have an opportunity of examining the reſult

ſult of it in caſes which will occur more frequently than once in a million of times; and conſequently of ſeeing whether the neceſſary conſequences of the doctrine in queſtion be conſiſtent with plain matter of fact.

Let any number of men, for inſtance a million, be ſuppoſed placed at the point A, (ſee Diagram II.), and let it be ſuppoſed, that to each of them there are applied at once two different motives, ſuch as hunger and thirſt, anger and fear, pleaſure or profit, one of theſe motives prompting them to go to the point B, the other prompting to go to the point C, at a certain rate; and let the men be ſuppoſed aſſured that they cannot attain both the objects which in ſuch circumſtances they muſt have in view, by taking them ſucceſſively:

What muſt become of them? or how will they act, conſiſtently with the hypotheſis?

As the conjunction of motive and action

tion is ſuppoſed to be broken once in a million of times, and as two millions of motives are ſuppoſed to be applied to one million of men, it may reaſonably be expected, that two of them ſhall feel the influence of only one of the two motives applied to them, and accordingly go directly either *to* B or *to* C, at the rate required. But then if both motives ſhould *chance* to be ſeparated from their proper actions, in the ſame perſons, at the ſame time, which, for aught that appears, is poſſible, even theſe two men *muſt* remain inactive at the point A. But perhaps this poſſibility will be thought too improbable to deſerve attention.

Let us then conſider the caſe of the odd 999,998 men, whom we placed at the point A, under the influence of two different motives, which we may call A B and A C; for there can be no doubt that it does deſerve attention.

As theſe men are unable to act except as impelled by motives, and as the motives impelling them are *ex hypotheſi* inſeparably

parably connected with their proper actions, the ſuppoſed number of caſes of disjunction in a million of inſtances being already deducted, their ſituation is very nearly that of the body in the firſt corollary from the three laws of motion; and if there be truth in the *Principia* of NEWTON, they *muſt* begin to move in the diagonal A D, and continue to move in that direction till they arrive at the point E. Then they will be under the influence of directly oppoſite motives, E B and E C, one of them ſufficient to induce them to go at a certain rate to B, the other ſufficient to induce them to go at the ſame rate to C. If theſe are equal, they *muſt* remain at reſt at that point, if they ſhould die for it, till ſome other motive occur to put them in action, as the aſs ſhould have done between two bundles of hay. If the oppoſite motives are unequal in force, the men, *ex hypotheſi*, *muſt* yield to the ſtronger, and go accordingly, either *towards* B or *towards* C. But it may be doubted, whether they will ever get quite to B or to C; and it cannot be doubted, that they cannot go from E to B,

or

or to C, at the ſame rate that they would do if they felt the influence of only one of the motives applied: for if they did, the other motive would be completely ſeparated from its proper action more frequently than is conſiſtent with the hypotheſis at preſent in queſtion; for the proper deduction of one inſtance in a million has already been made; and of courſe they will not attain that object, the deſire of gaining which was their motive for going to B or to C, for inſtance, the money promiſed them; becauſe they do not comply with the condition on which it was offered them, namely, going at a certain rate to one or other of thoſe points.

Any proportion of frequency between the conjunction and the ſeparation of motive and action may be aſſumed at pleaſure, and ſtill the ſame notorious and ridiculous falſities, (which it would be needleſs and abſurd to put to the teſt of experiment), only in different proportions of frequency to one another, will be neceſſary conſequences of the ſuppoſed *inertia* of

of mind, and irreſiſtible influence of motives.

Theſe concluſions I give as matters of mathematical certainty, but not of mathematical preciſion. They all depend on the doctrine of Chances; and therefore all that is demonſtrable with reſpect to them, or in ſuch ſimple caſes as I have put, is ſelf-evident, is, that it is an equal chance, on the hypotheſis aſſumed, that the reſult will be what I have ſpecified. Thus, for inſtance, in the firſt caſe put, of the equal frequency of the conjunction and of the ſeparation of motive and action, it cannot be proved, that 50,000 out of 100,000 very hungry men will die of hunger, though they have plenty of food at their command; but it is demonſtrable, or rather ſelf-evident, that, on the hypotheſis aſſumed, it is an equal chance that ſuch a number will do ſo. No perſon of candour, I dare ſay, will regard this acknowledged and neceſſary imperfection in the doctrine of Chances as any imperfection in my argument. But if any ſhould be ſo unreaſonably captious, I ſhall admit frankly,

that, inſtead of 50,000, there may be but 49,500, or but 40,000, or but 20,000, out of the 100,000, that will remain ſo fooliſhly inactive; and they in return *muſt* admit, that it is alſo poſſible, and juſt as probable, that 50,500, or that 60,000, or that 80,000, out of the 100,000, may remain inactive, and die accordingly.

This, therefore, I conceive to be mathematical demonſtration of the falſity of the common doctrine of Neceſſity, *as hitherto ſtated.*

SECT.

SECT. XVII.

The common doctrine of Neceſſity ſtated, with the modification, that the ſtrongeſt Motive alone is conjoined with its proper Action, and that all the weaker and oppoſing Motives are ſeparated from theirs.—Various circumſtances of falſity and abſurdity in this doctrine, which are to be demonſtrated.—Preliminary Queſtions ſtated. — What is meant by the force or ſtrength of ſuch Motives? — What is the teſt or meaſure of their ſtrength?

IT will perhaps be thought very needleſs to have taken the trouble to give ſuch a demonſtration of the falſity of a doctrine that never was maintained; for it will occur at once to every perſon who ever heard of the controverſy, that the doctrine of Neceſſity, as generally aſſerted, has always comprehended another cir-

cumſtance, not ſtated in the preceding argument, to wit, that the ſtrongeſt motive always prevailed, and had its full effect, while the weaker motives were overpowered, and had no effect at all; that is, were completely ſeparated from their proper actions.

The common doctrine of Neceſſity, with this peculiar modification, has been, That the ſtrongeſt motive alone is conjoined with its action, while all the weaker oppoſing motives are ſeparated from theirs. And even this ſuppoſition may eaſily be ſhewn to be falſe and abſurd, by tracing its neceſſary conſequences.

But it was proper, in the firſt place, to conſider the more ſimple ſuppoſition, in order to ſhew, that *it* was untenable, and that ſuch a modification of it was indiſpenſably neceſſary, and not a mere arbitrary and ornamental addition: for the ſame reaſon that in mathematical demonſtrations, *ad abſurdum*, we ſtate and refute every poſſible ſuppoſition inconſiſtent with the one which we mean to eſtabliſh, tho' theſe

theſe may be ſuch as no perſon ever thought of maintaining.

The doctrine of Neceſſity, even with this modification, that motives have different degrees of ſtrength or force, and that the ſtrongeſt are conſtantly conjoined with their actions, while the oppoſing weaker motives are always * ſeparated from

* This, I believe, is more than any of the aſſertors of the doctrine of Neceſſity will chuſe to maintain, or even to admit: for it is plain, that, in many caſes at leaſt, the oppoſing weaker motives have effect, as appears by their diminiſhing or modifying the effect of the ſtronger and prevailing motive; for inſtance, in the caſe of juſtice tempered with mercy, paſſion moderated by prudence, and many others. But I know not how otherwiſe to expreſs the general hypotheſis of the Neceſſarians, without involving again the doctrine of Chances, of which ſurely enough has been ſaid already. The defect in this caſe, and the *impoſſibility* of giving, in general terms, an accurate expreſſion of the hypotheſis in queſtion, I apprehend, proceeds not from any fault or any error of mine, but is the neceſſary reſult of the imperfection of the doctrine itſelf, which is repugnant, not only to vulgar belief, but to many obvious facts, which philoſophers themſelves muſt admit. Such facts have,

from theirs, may be ſhewn to labour under ſeveral very grievous defects, as bad at leaſt as thoſe of the other ſuppoſitions which have already been conſidered. It may be ſhewn,

1. That it is inconſiſtent with plain matter of fact.

2. That it is inconſiſtent with itſelf.

3. That there is no ſuch force or ſtrength in motives as is repreſented in the doctrine of Neceſſity, even ſetting aſide the principle of conſtant conjunction.

4. That, from the nature of things, there can be no ſuch force in motives.

5. That many, perhaps moſt, of thoſe who have aſſerted the doctrine in queſtion with the greateſt confidence, have

have, in general, been diſregarded by philoſophers, or explained away; while thoſe only were attended to, and inſiſted on, which favoured, or might be conſtrued to favour, their darling ſyſtem.

never

never in their hearts believed that there was ſuch a force or ſtrength in motives.

Nor is there any great difficulty in proving theſe points, however ſtrange ſome of them may appear; but there is the utmoſt difficulty in inveſtigating two other preliminary points, which are of much conſequence in this inquiry. The firſt of theſe preliminary points is, What is meant by the ſtrength or force of motives that are not conſtantly conjoined with their reſpective actions? The ſecond is like to the firſt, and very intimately connected with it, namely, What is the teſt or meaſure of the comparative force of ſuch motives?

Theſe two points I ſhall conſider, as much as poſſible, ſeparately, to prevent confuſion; for each of them will require a minute and pretty long diſcuſſion.

SECT.

SECT. XVIII.

Remarks and Queries concerning the notion of the abſolute Strength or Force of Motives that are not conſtantly conjoined with their reſpective Actions.

IT has already been ſhewn, that motives are not conſtantly conjoined with their proper actions, as phyſical cauſes ſeem to be with their reſpective effects. But, nevertheleſs, it is held, that motives have ſtill ſome peculiar property, or at leaſt ſome eſtabliſhed relation to their proper actions, which may be termed their abſolute force or ſtrength; which is very analogous to the eſtabliſhed relation between phyſical cauſes and their effects, commonly termed the force or influence of ſuch cauſes; and which completely excludes any independent activity or ſelf-governing power in the perſon or agent.

It

It is plain, then, that the conſtant conjunction of a motive with its action, and the ſtrength of a motive, are two different things; and I apprehend it would be very deſirable, and of the moſt eſſential importance in this inquiry, to know preciſely, either by means of ſtrict logical definition, if ſuch can be given, or elſe by means of clear and explicit illuſtration, *per inſtantias ſingulares earumque ſeries et ordines*, what is meant by the ſtrength of a motive when ſeparated from its proper action, or as we expreſs it in common language, which a perſon *reſiſts*, or according to which he does *not* act.

In order to explain more accurately than can well be done by common and general words, the nature and importance of the *deſideratum* which I here point out, and of the queſtion which I propoſe, I ſhall ſuppoſe, that there are applied to a perſon, at the ſame time, two particular oppoſite motives; that is, motives prompting to different actions; which actions, either in their own nature, or by ſpecial compact, are abſolutely inconſiſtent, ſo that both of

them cannot take place ſeparately, nor can they be combined into a ſort of *tertium quid.* Such oppoſitions of motives, and inconſiſtencies of actions, are by no means imaginary; they happen often between duty and intereſt, pleaſure and profit, anger and fear, or between different kinds of intereſt and of pleaſure. For the ſake of diſtinct reaſoning about any two ſuch oppoſite motives, we ſhall call one of them X and the other Y. We ſhall ſuppoſe, that X is fully conjoined with its proper action; and that Y is completely ſeparated from the action to which it prompted; the conduct of the perſon acting being preciſely, both in kind and in degree, what it would have been, if Y had not been applied, and if X alone had been applied to him. In every ſuch caſe, X is ſaid to be the ſtronger, Y the weaker motive. This implies ſurely, that there is in Y a certain portion of ſtrength; and, at any rate, this muſt be admitted, elſe no increaſe or multiple of Y, nor any addition of ſtrength to it, could ever make it equal to X, or greater than X. But it is not even pretended that this is the caſe: on

on the contrary, it is always underſtood, and acknowledged by thoſe who ſpeak of the force of motives, that the addition or concurrence of two or more weaker motives may amount to a greater ſum of force than one other motive; though this motive be much ſtronger than any one of the others taken ſingly. Many a man, it muſt be acknowledged, will take a great deal of trouble, or commit a vile piece of roguery, for 100 or for 1000 guineas, who would not have done the ſame for one, or even for ten.

It would no doubt be a great help to our reaſonings on ſuch ſubjects, and perhaps would at once put an end to all diſputes about them, if any circumſtance about the motive X, different from what takes place in Y, in conſequence of which, a perſon unable to act, except as impelled by motives, is influenced by it, and not by the oppoſite motive, could be ſpecified or defined, without involving the very point in diſpute; that is, making the whole ſyſtem an everlaſting *petitio principii*. For any thing that appears, nothing more

would be wanting to make Y the ſtronger, and X the weaker motive, but that the perſon ſhould act as prompted by Y, diſregarding the influence of X. It would be a great ſatisfaction to know what hinders a perſon from acting in that manner; or even to be aſſured, that he is hindered, or is unable to act in that manner, from whatever circumſtances his incapacity may proceed.

I muſt here repeat what is ſaid (SECT. IV. p. 133.) concerning the neceſſity of guarding againſt a very fooliſh controverſy which might naturally occur with reſpect to the application of the term *Motive*. We are not inquiring, whether thoſe things uſually called motives, or principles of action, ſuch as appetites, paſſions, deſires, averſions, judgements of duty, expediency, &c. are to be called motives at all times when they take place, or only when action proceeds from them; but what is the nature of the relation between them and actions, and what is meant by their force or ſtrength. If any perſon ſhould aſſert, that the deſire of wealth, the fear of death, the

the cravings of violent hunger, or the extremity of torture, were not motives in thoſe caſes in which the perſons to whom they were applied reſiſted them, and, notwithſtanding them, perſevered unſhaken in their duty, he might indeed evade the argument concerning the conſtant conjunction of *motive* and action, and the queſtion concerning the abſolute force of *motives;* but the ſame argument with reſpect to the conſtant conjunction, or the occaſional ſeparation, of thoſe *things* and their reſpective actions; and the ſame queſtion with reſpect to the force or ſtrength of thoſe *things*, as relative to action, and yet ſeparated from it, would await him.

It muſt not be thought that this is a diſpute about a word: it is an important queſtion about a thing denoted by a word. The words *force* or *ſtrength*, as applied to motives by thoſe who deny independent activity to perſons, ſhall be allowed, unqueſtioned, to ſignify any conceivable quality or condition of a motive, or any relation, poſſible or impoſſible, between motive

tive and action, which thoſe who uſe it can ſpecify, and which does not involve the very point in diſpute, to wit, the volition and action of the perſon, and the relation between theſe and the motive according to which they take place. For if this be included in the definition of the ſtrength of a motive, to be ſure, any motive with it is ſtronger than any motive without it. But then, to ſay that a perſon acted in a certain way, becauſe the motive prompting to do ſo was the ſtrongeſt of thoſe applied, would be merely an identical propoſition, equivalent to ſaying, that he acted according to the motive according to which he did act.

The phraſe *ſtrength* or *force of motives*, in the common popular acceptation of it, is abundantly well underſtood, and is familiar to us all. But in this ſenſe, far from excluding the independent activity of mind, or being inconſiſtent with the liberty of human actions, it always implies and refers to theſe things; as in the caſe of ſtrong temptation from evident intereſt or pleaſure, of great and acknowledged

ledged duty, nay, even of irreſiſtible compulſion.

It is not diſputed, nor can it reaſonably be diſputed, that the vulgar always believe, that, in ordinary caſes, a perſon who is only tempted may reſiſt the temptation; that a perſon who merely ought to do a certain action, may yet not do it; and that a perſon abſolutely compelled to do any thing, cannot help doing it; but that if the force or degree of the motives applied to him had been much leſs, he would not have been compelled, and might have avoided doing it. But philoſophers endeavour to ſhew, that all theſe vulgar perſuaſions are erroneous, and to account for all the facts or phænomena, without allowing any independent activity to the perſon, on the ſuppoſition, that in all thoſe caſes the relation of motive and action is either very nearly or preciſely the ſame with that of cauſe and effect in phyſics; and that there is in every motive that is followed by its proper action, ſome quality, or at leaſt ſome relation to the perſon, which may be termed its *force*, which

is

is greater or ſtronger than the correſponding quality in the oppoſing motive, and by which the volition and action of the perſon is abſolutely and irreſiſtibly determined, though not conſtrained.

It may be worth while to conſider a little the caſe of compulſion, as it will ſhew very plainly the imperfection of the philoſophical notion of the force of motives.

There are few motives ſtronger, or more univerſal, than the love of life, or fear of death, and the abhorrence of pain. Few motives either are more nearly equal, reſpectively, in different individuals. Hence they are almoſt univerſally employed as means of compulſion. It muſt, however, be acknowledged, that they are not equally powerful in their influence in all different men. They are conceived, and I believe very properly, to be ſtrongeſt, and eſpecially the fear of death is thought to be ſo, in thoſe perſons who have little vigour of mind, (no matter at preſent for the propriety of the phraſe, it

is

is ſufficiently explained by the common application of it). But, diſregarding this difference, which no doubt is conſiderable, we ſhall ſuppoſe the fear of death to have no greater influence in the moſt cowardly than in the braveſt, in thoſe who have leaſt, than in thoſe who have moſt vigour of mind; and ſhall regard the ordinary force of this motive as a kind of ſtandard, by which the force of others may be meaſured. This ſuppoſition, though inaccurate, is the moſt unfavourable that can be made with reſpect to the argument which at preſent I have in view.

The abhorrence of pain of any given intenſity, muſt be ſuppoſed very nearly the ſame in all mankind; and it muſt be ſuppoſed, that the abhorrence of any pain muſt be very nearly in proportion to the intenſity and the continuance of it. With reſpect to this motive, therefore, we have a diſtinct notion of the force or ſtrength of it, (at leaſt according to the vulgar conception of the force of a motive), conſidered by itſelf, and without involving the action to which it prompts. Moreover,

from various circumſtances, we are enabled, in many caſes at leaſt, to judge of the intenſity of the pain, as well as of the continuance of it, and of courſe of the abhorrence of the perſon to it, or the force of this motive; not indeed with mathematical accuracy, but with tolerable preciſion.

Now, theſe two motives, the fear of death, and the abhorrence of preſent pain, have often been ſet in oppoſition. By an abſurdity equally ſhocking to reaſon and to humanity, and which, it is to be hoped, will ſoon come to an end in every civiliſed country, the torture has often been applied to obtain from criminals a confeſſion of their guilt, which could not otherwiſe be proved, and for which, as ſoon as proved by their own confeſſion, they were to ſuffer death. In ſome countries, a criminal, even though convicted on the cleareſt evidence, muſt not be put to death till he confeſſes his crime, and acknowledges the juſtice of his ſentence. In all theſe caſes, the fear of death and the abhorrence of pain are motives directly oppoſed; and, according

according to the philoſophical doctrine of Neceſſity, and peculiar notion of the force of motives, the reſult *muſt be* as follows: Either the fear of death, which is ſuppoſed to be of uniform ſtrength, or very near it, muſt be found univerſally ſtronger, or it muſt be univerſally weaker, than any kind of torture commonly employed; or there muſt be a *certain degree* of torture uniformly ſufficient and requiſite to get the better of the fear of death in all ordinary perſons. The two firſt of theſe concluſions we may ſafely diſregard, and conſider only the laſt of them, which perhaps will appear plauſible or certain. But it has been found in fact, that there is a vaſt difference among men with reſpect to what they can or will bear in the way of torture. Of two men, whom we may, and indeed *muſt*, ſuppoſe equally unwilling to be hanged, one perhaps yields very quickly to the ſlighteſt tortures that are commonly uſed, the other reſiſts for a long time the moſt violent that can be invented. Nor can this difference be with any plauſibility attributed to the different degrees of ſtrength of the oppoſite motives in the different per-

ſons. For this is not only a gratuitous ſuppoſition, and therefore unphiloſophical; but, moreover, it involves certain ſuppoſitions that are in the higheſt degree improbable, if not quite inadmiſſible. It implies, either that one of the perſons is much leſs unwilling to be hanged than the other, which is ſcarce credible, and very difficult or impoſſible to prove; or elſe, that a ſlight degree of torture, and for a ſhort time, is a ſtronger motive than a violent degree of the ſame kind of torture for a long time; which appears little leſs than abſurd. To ſay that a certain degree and continuance of torture is a ſtronger motive with the perſon who yields to it, than with him who reſiſts it, is only begging the queſtion once more; even ſuppoſing ſuch a ſentence to be intelligible, which it certainly is not, till it be ſpecified what is meant by the ſtrength or force of a motive, which is neither conſtantly conjoined with its proper action, nor yet refers to or implies the independent activity of a perſon.

Theſe remarks, however, are given only as

as an illuſtration of the obſcurity, ambiguity, and imperfection, of the philoſophical *notion* of the ſtrength of motives; not as a proof of the falſity of the opinion concerning it. For hypotheſes and concluſions as groundleſs, and as extravagant, as theſe are, have been maintained or admitted on the ſame ſubject; and ſo perhaps will theſe be. At any rate, the inquiry into the exact import of a *notion* ought to precede the attempt to explode it, or to refute opinions that involve it, or that relate to it.

SECT.

SECT. XIX.

Remarks on the difficulty or impoſſibility of finding a proper teſt of the abſolute force of Motives that are not conſtantly conjoined with their reſpective Actions.—The phraſe ſtrongeſt Motive *is ſynonymous with the phraſe* Motive according to which a perſon acts; *and is therefore nugatory in this inveſtigation.*

THE other great difficulty and imperfection of the philoſophical doctrine concerning the ſtrength of motives, is, the want of a proper teſt or meaſure of it.

The ſuppoſition, that the ſtrongeſt always is that which prevails, is not merely a conſtant *petitio principii*, but it is an identical propoſition, till ſuch time as ſome condition or quality of motives be ſpecified,

fied, or at leaſt ſome definite relation of them to their reſpective actions, which may be termed their *force*, independently of their apparently having effect, or being conjoined with their actions; ſuch as, the conſtant conjunction of cauſe and effect in phyſics, (which, on ſtrict obſervation, is found to take place even in thoſe caſes where, on a ſuperficial view, it is not to be perceived); the occaſional exertion of the muſcular ſtrength of men or other animals; the eſtabliſhed relation between evidence of various kinds and belief or conviction, either in the common affairs of life, or in different branches of ſcience; or, what is ſurely neareſt to the ſtrength of motives in the philoſophical ſenſe of the term, (if there be ſuch a thing), the ſtrength of motives, according to the vulgar notion of it; duty, intereſt, pleaſure, or various degrees of them, concerning which mankind are very generally agreed, and which may eaſily be ſpecified without any regard to their having effect or not. For we may know preciſely, in many caſes, how a perſon *ought* to act, either in point of duty or intereſt, and be certain, that

that one motive was, in this point of view, ſtronger than the oppoſing one: we may know in many caſes, too, how a perſon *would like* to act, which is another kind of ſtrength of a motive; but in neither of theſe caſes can we be equally ſure, that he will act either as he ought to do, or as he would like moſt to do. And this uncertainty, and the difference of the reſult in different caſes, we conceive to depend on ſomething in the perſon himſelf, not on any quality in the motives, nor yet on any relation between them and the volitions and actions of the perſon.

According to this vulgar notion of the force of motives, it is plain, that no motives can be commenſurable, or even appretiable with reſpect to one another, but ſuch as are preciſely of the ſame kind; duty with duty, intereſt with intereſt, pleaſure with pleaſure, torture with torture, terror with terror. But the univerſal and promiſcuous commenſurableneſs of all motives, bearing relation to the ſame action, is implied in the philoſophical notion of the force of motives.

It

It muſt ſurely be very evident, that, on the ſuppoſition that the connection of motive and action is but occaſional and ſeparable, and yet that men can act only as they are impelled by motives, we can never have any reaſon to believe, from any perſon's conduct, that the motives prompting to thoſe actions which he performed were ſtronger than the oppoſing motives; for the ſtrongeſt motives might *chance* to be ſeparated from their proper actions, while the weakeſt were conjoined with theirs; juſt as if the effect of a heavy body in turning a balance was only occaſional, a cubic inch might ſometimes outweigh a cubic foot of ſolid lead; though the latter be more than 1700 times as heavy as the former: for whenever the weight of it *chanced* to be ſeparated from the uſual effect on the balance, it would be as if it were not.

If a juggler could contrive a balance of ſo peculiar a kind, that, though to all appearance perfectly juſt, and at leaſt as incapable as any other balance of moving or turning itſelf, when a cubic inch of

lead was put into one of the ſcales, and a cubic foot of lead into the other, ſometimes the inch, ſometimes the foot, ſhould preponderate; What ſhould we think of him and his balance? He would no doubt gain credit for his ingenuity, and probably make a fortune by his contrivance: but it may well be doubted, whether, in the four quarters of the world, a ſingle individual could be found, who would believe that the various turns of the balance depended merely on the different weights of the pieces of lead put into the ſcales. The vulgar, according to cuſtom, and as they have recently done with reſpect to the figure that plays at cheſs, would at once ſet about accounting for what they ſaw, by ſuppoſing, either that the artiſt himſelf had ſome ſecret means of directing the movements of his balance, or elſe that ſome other *living* Being, though perhaps inviſible to them, inclined the balance ſometimes the one way, ſometimes the other: few, if any, would venture to maintain, that the different turns of the balance depended either on the occaſional and ſeparable connection

nection of cauſe and effect, or on the circumſtance of the different pieces of lead having different degrees of weight at different times. Indeed this laſt hypotheſis ſeems to ſurpaſs, not only the belief, but even the underſtanding of mankind. Nor would the caſe be different, if ſuch a juggler were to exhibit a number of balances ſo oddly conſtructed, that though they all ſeemed perfectly juſt, yet what preponderated in one did not preponderate in the others; and this in an endleſs variety of combinations. Moſt men would be ſtartled at the hypotheſis, that the things weighed in them were really of different weight when put into the different balances; and that the balances themſelves were ſo conſtituted, as ſometimes to be more affected by one kind of weight than by another. Yet an hypotheſis very nearly or exactly the ſame, and requiring at leaſt an equal ſtretch of faith and underſtanding with the one juſt now ſtated, muſt be held by thoſe who, without admitting any independent activity in the perſons, and merely on the ſuppoſition of different degrees of force in the motives applied, and

the various conditions of the perſons to whom they are applied, undertake to account for the different conduct of different individuals, in circumſtances where the motives applied to them muſt be underſtood to be of equal force reſpectively in them all. The ambiguity of the phraſe, *force of Motives*, which has one meaning, and that a very rational one, as employed by the vulgar, and a very different, very obſcure, and ill underſtood one, as uſed by philoſophers, ſeems to have contributed to conceal the impropriety, and even the real import, of ſuch an hypotheſis.

On conſidering, again and again, this and the preceding ſection, I have always found in them ſomething peculiarly unſatisfactory and diſagreeable; which I preſume will be at leaſt as ſtriking to any perſon who may have the curioſity to read them, as it does to the author of them. Yet, on the moſt careful examination

tion, I cannot find any error, either in the obſervations, or in the reaſonings contained in them; and I believe the peculiarity of them, and the ſeeming defect in them, proceeds from this circumſtance, that they are an unſucceſsful attempt to find out the nature and the proper teſt of the abſolute force of motives that confeſſedly are not conſtantly conjoined with their reſpective actions, as phyſical cauſes ſeem to be with their effects.

But it muſt be obſerved, that my want of ſucceſs in this attempt is no fault of mine, nor any defect in my obſervations and reaſonings: it proceeds from the nature of the ſubject of inveſtigation. My undertaking was not to explain the nature of the abſolute force of motives ſeparable from their effects, nor to give a ſatisfactory teſt of the force of ſuch motives; but to inquire ſtrictly, whether or not there was ſuch a force in them; whether or not any proper teſt could be given of it; and to find out, if poſſible, what could be meant by ſuch a phraſe as the abſolute force of motives ſeparable from their proper

per actions, and not implying or referring to independent activity, or ſelf-governing or ſelf-determining power in the agent or perſon. I did not undertake to make ſenſe of that doctrine, but only to find out, whether ſenſe could be made of it or not. The reſult of my inquiry, which I own has been conducted rigorouſly, but I truſt candidly, has been unfavourable to the doctrine in queſtion. The notion of the abſolute force of motives ſeparable from their effects, and not referring to the ſelf-determining power of a perſon, appears to be one of thoſe which are very properly termed by BACON *falſæ, confuſæ, et temerè a rebus abſtractæ*, on which account, *nihil in iis quæ ſuperſtruuntur eſt firmitudinis. Itaque ſpes eſt una in inductione verâ.* In plain Engliſh, That notion is nonſenſe; and the doctrine founded on it is not a jot better; and therefore the ſubject muſt be carefully examined anew by accurate obſervation and experiment, and ſtrict inferences from theſe: Which is juſt what I am endeavouring to do. But it would have been to no purpoſe to ſay this of it, though true, without carefully examining it: it would

even

even have been illiberal and unphiloſophical to have ſaid ſo before this examination; and it may be thought not very civil to ſay ſo after all. But in a philoſophical inquiry, it is neceſſary above all things to be fully underſtood.

SECT.

SECT. XX.

Suppoſition of the abſolute Force of Motives not conſtantly conjoined with their reſpective Actions, with the modification that the ſtrongeſt Motive alone is conjoined with its proper Action, while the oppoſing weaker Motive is always ſeparated from its Action, and that the prevailing Motive is always the ſtrongeſt, in ſo far as it is intelligible, ſtated accurately, — conſidered mathematically.—Neceſſary inferences from it, that are abſurd and impoſſible.

FROM what has been ſaid in the two preceding ſections, it muſt be evident, that the notion of the abſolute force of motives not conſtantly conjoined with their reſpective actions is at beſt very vague, confuſed, and imperfect; and that even ſuppoſing that notion to be rational, it muſt be very difficult, if indeed it be poſſible,

poſſible, to find an accurate teſt or meaſure of the ſuppoſed force or ſtrength of ſuch motives. But leaving ſuch inveſtigations to the care of thoſe who are intereſted in finding out or making a diſtinct meaning, and a fair unequivocal teſt, for the force of motives; diſregarding whatever is obſcure or unintelligible in the force of motives, according to the philoſophical ſyſtem concerning it; and confining our attention ſolely to thoſe circumſtances of it which are explicit and intelligible, it will be eaſy to ſhew, that no ſuch force of motives does or can exiſt, or has generally been believed to exiſt, even by philoſophers themſelves.

It may appear a piece of ſingular preſumption, to undertake to reaſon about a thing ſo imperfectly underſtood as that at preſent in queſtion. But the preſumption and difficulty in this caſe are not ſo great as may at firſt be thought; and the reaſonings may be ſufficiently diſtinct and concluſive, if thoſe circumſtances alone are conſidered and reaſoned about, which may be accu-

rately expreſſed, and which are clearly underſtood.

The chief of theſe are,

1. That the abſolute ſtrength or force of motives may be meaſured or eſtimated, with a certain degree of preciſion, by the actions proceeding from them.

2. That the comparative ſtrength of motives may be meaſured, with a certain degree of preciſion, by the relation of different, and eſpecially of oppoſing motives to one another; and that univerſally the motive according to which a perſon acts, or which is ſaid to prevail, is ſtronger than the oppoſing motive, according to which he does not act, or which in common language he is ſaid to reſiſt.

3. That there exiſt among different motives, with reſpect to ſtrength, the relations of equal, greater, and leſs.

4. That different motives may either concur with one another, or oppoſe one another.

5. That

5. That when they concur, the ſtrength of them is added together.

6. That when equal motives directly oppoſe one another, the ſtrength of thoſe on one ſide completely counteracts and deſtroys that of thoſe on the other ſide; and that the one force may be conceived to be deducted from the other, leaving of courſe no remainder.

7. That when motives of unequal ſtrength oppoſe one another, the ſtrongeſt always prevails, and is followed by its proper action, which is always in kind, and *generally* * in degree too, what it would have been if no oppoſing motive had been applied.

8. That a motive applied ſingly, or a number of concurring motives applied at once, and unoppoſed, will inevitably be followed by their proper actions, where there is no phyſical impediment to theſe; which laſt circumſtance muſt be under-

* Vide p. 357, Note.

ſtood to be the conſtantly implied condition in every caſe.

The 6th and 7th of theſe ſpecified circumſtances are equally and indiſpenſably neceſſary, as parts of the doctrine in queſtion. But as they are abſolutely inconſiſtent with one another, no relation between motives and actions, and no kind of ſtrength or force of motives, which implies them both, can from the nature of things ever exiſt.

This inconſiſtence of the two circumſtances, and the conſequent impoſſibility of that ſyſtem which involves them both being true, will appear very clearly from conſidering the caſe of equal and oppoſite motives, with the ſuppoſed neceſſary reſult in all ſuch caſes, and the expedients commonly employed to account for a different reſult *univerſally* taking place in fact.

It is held, that in ſuch a caſe no action can be performed. The correſponding concluſion with reſpect to cauſes and effects

fects in phyſics is always found true as a matter of fact. And the ſame concluſion is ſaid to hold equally true with reſpect to motive and action: but of this there may be ſome doubt, as few or no inſtances can be produced in ſupport of it. It has never yet been found on trial, that an aſs placed between two equal and ſimilar bundles of hay, died of hunger in that ſituation for want of a motive to determine him to the one or the other bundle. But this *conſtant* failure of the experiment, which it may be remarked is not obſerved, but foreſeen, is accounted for by *ſuppoſing*, either that the bundles will not be exactly equal and ſimilar, and equally diſtant, or elſe that the aſs, though a creature of no very quick diſcernment or lively imagination, may yet have penetration or fancy enough to perceive or imagine ſome reaſon for preferring the one to the other bundle. As we have no means of converſing with aſſes, ſo as to learn their thoughts on the point in diſpute with ſufficient accuracy, it may be expedient to acquieſce in this account of the matter. Though it muſt be obſerved, that it is trying the truth of a ſuppoſed fact by its agreement

greement with an hypotheſis, inſtead of trying the truth of the hypotheſis by its agreement with matter of fact; which is altogether inconſiſtent with good reaſoning, and ſuch an impropriety as never would be admitted, nor even thought of, in any branch of phyſics.

Conceiving that men had a better chance of knowing ſomething of their own thoughts, than of thoſe of any quadruped, I have endeavoured to attend accurately to my own thoughts in ſimilar caſes: yet, after the moſt careful attention to them, I cannot find that I have any difficulty in chuſing one of two chances which I know to be perfectly equal; or in chuſing one card out of a pack, where I am ſure there can be no reaſon for preferring one to another. But I have been aſſured, with much ſerioufneſs, by good metaphyſicians, that even in theſe caſes I had always a motive for my preference, though I would not own it; and that if I had no other motive for my choice, the greater facility of pronouncing one word than another, would be ſufficient to determine me to ſay the one rather than the other. Of this I

am

am not in the leaſt conſcious, but rather, as I think, of the reverſe: however, as it was in vain to reaſon with men who knew my own thoughts better than I did myſelf, I was obliged to give up the point.—But there are ſome other points, relating to the ſame ſubject, which I cannot and will not give up.

Let a porter be offered 100 guineas, if he will carry a letter ten miles due eaſt, and at the ſame time let him be offered an equal ſum, if he will carry the letter the ſame diſtance due weſt; and let him be aſſured, that he cannot earn both the ſums that are offered: Will he ſtand ſtill, as the aſs ſhould have done, between two bundles of hay? or will be chuſe between going eaſt and going weſt, and earn 100 guineas accordingly, as he cannot hope to earn 200?

It will be admitted, I preſume, that he will not ſtand ſtill, but carry the letter either one way or the other. But this, according to the hypotheſis, he cannot do, without ſome motive or ground of preference, real

real or imaginary. Whenever ſuch a thing is found or ſuppoſed, the oppoſite motives are no longer equal; and as ſoon as they become unequal, the ſtrongeſt will prevail, according to the *hypotheſis*, and will have its full effect, as if unoppoſed.

Now, let us conſider accurately this kind of reaſoning, and expreſs it in mathematical form, for the ſake of ſimplicity and preciſion, and that we may the more eaſily trace the neceſſary conſequences of the *hypotheſis*.

The force or ſtrength of the two original great motives which are equal and oppoſite, we ſhall call X and Y.

The ſtrength of the minute additional motive diſcovered or fancied by the porter on one ſide, we ſhall call Z.

Z, we know, ſcarce bears a ſenſible proportion to X or Y; but for the ſake of eaſy calculation, we ſhall ſuppoſe either X or Y taken ſingly to be equal to 100 Z.

From

From theſe principles, and the hypotheſis of the abſolute force of motives which are not conſtantly conjoined with their reſpective actions, we have, by neceſſary conſequences, the following ſimple equations.

$$X = Y,$$
$$Y = 100\,Z,$$
$$X = 100\,Z,$$
$$X - Y = 0,$$
$$X + Z - Y = X + Z \text{ *},$$
$$Y = 0,$$
$$X = 0,$$
$$100\,Z = 0, \quad \text{Q. E. D.}$$

Though it be very unuſual, and in general very needleſs, to offer any commentary on ſuch a ſimple piece of mathematical reaſoning as the preceding equations,

* This equation may appear abſurd, after the preceding four. In common algebra, or in phyſical reaſonings about cauſes and effects, or even in metaphyſical reaſonings about motives and actions, on the principle of the conſtant conjunction of motive and action, and the perfect identity of this relation with that of cauſe and effect in phyſics, it muſt have been $X + Z - Y = Z$. For X is ſtated at firſt as equal to Y. But ſuch is the doctrine of Neceſſity at preſent under conſideration.

yet, as there is ſomething uncommon, both in the ſubject and in the concluſion, in the preſent caſe, it may be worth while to conſider with peculiar care every ſtep of the reaſoning employed.

The three firſt equations expreſs with ſufficient accuracy the comparative force or ſtrength of the different motives applied in the caſe put, according to the doctrine of Neceſſity, with thoſe needful modifications which we are now conſidering.

The fourth equation expreſſes accurately the neceſſary reſult of the oppoſition of equal motives, according to the doctrine of Neceſſity.

The fifth equation expreſſes accurately (perhaps ſome may think too rigorouſly, but of this afterwards) the neceſſary reſult of the oppoſition of unequal motives, according to the doctrine of Neceſſity, with the modification already ſpecified, and allowed to be indiſpenſably requiſite to it, namely, That the ſtrongeſt motives alone have effect, and that they have

have their full effect, juſt as if they were unoppoſed.

The ſixth equation is a ſimple, and manifeſtly neceſſary inference from the fifth.

The ſeventh and eighth equations are manifeſtly neceſſary inferences from the ſixth, the firſt, and the third; for if Y be equal to nothing, and X and 100 Z be ſeverally equal to Y, they muſt alſo be equal to nothing.

In plain Engliſh, there is not, nor can there be in motives, ſuch a kind of force or ſtrength.

It will perhaps be thought, that the doctrine of Neceſſity has been ſtated too rigorouſly, in the preceding equations, and eſpecially in the fifth of them. It may be ſaid, that the minute additional motive Z, though ſufficient to turn the ſcale when it was exactly balanced before, was too inconſiderable to have any effect by itſelf, or even to add to the effect of the ſtrong motive X; and that accordingly the force of

X + Z — Y would be juſt the ſame with that of X by itſelf. If the doctrine of Neceſſity were juſt, I apprehend it could not be ſtated, nor concluſions be deduced from it too rigorouſly, any more than from the commonly received principles of mechanical philoſophy, or of pure geometry. But not to run any riſk of being thought too ſcrupulous or rigid on ſuch a point, I ſhall admit, that the additional minute motive Z, when added to X, makes no greater ſum of force, and would produce no greater effect in point of action, than X by itſelf, and unoppoſed. But then I muſt beg leave to ſtate even this *hypotheſis* in mathematical form, for the ſake of preciſion and diſtinct reaſoning. We ſhould then have the following ſimple equations.

$$X = Y,$$
$$Y = 100\,Z,$$
$$X = 100\,Z,$$
$$X - Y = 0, \quad \text{(as before)},$$
$$X + Z - Y = X,$$
$$Y = Z,$$
$$Z = 100\,Z.$$

Which is abſurd.

The

The four firſt of theſe equations are juſt the ſame with the four firſt on the former more rigorous ſuppoſition and ſtate.

The fifth equation is an accurate expreſſion of the reſult, on the ſuppoſition that the minute additional motive which turns the balance does not add any thing to the force of the greater motive, with which it concurs, but only allows it to have its full and proper effect as if unoppoſed.

The ſixth equation is a manifeſtly neceſſary inference from the fifth. And let it be remembered always, that the weaker, and conſequently overpowered motive, though completely ſeparated from its proper action, does not, even according to the doctrine of Neceſſity, ceaſe to have force or ſtrength; as appears by two or more motives which concur, being ſtronger than one oppoſing them, though weaker than it when taken ſingly. Thus, in the preſent caſe, it would be admitted, that $Y + \frac{Y}{10}$ would be a greater ſum of ſtrength

ſtrength than X + Z; though $\frac{1}{10}$ taken by itſelf would have much leſs force than X + Z, or even than X by itſelf.

The ſeventh equation is a plain and neceſſary inference from the ſixth and the ſecond. For if Z be equal to Y, and 100 Z be alſo equal to Y, Z and 100 Z muſt alſo be equal to one another.

Such, without exaggeration or miſrepreſentation of any kind, is the abſurdity which ambiguous words, and looſe reaſoning, and vague and groundleſs *hypotheſes*, multiplied without end, whenever there was thought to be occaſion for them, have hid from the view of many philoſophers diſtinguiſhed for the acuteneſs of their underſtanding, and the extent of their knowledge.

I am aware of the ridicule that may attend the attempt ſeriouſly to ſtate and to refute ſuch abſurd opinions; but if this attempt be ridiculous, what ſhall we ſay of the conduct of thoſe whoſe pretended ſcience has made it neceſſary; who

who have been proud to maintain as an important piece of knowledge, that very doctrine, which, when ſtripped of all ambiguity, and made intelligible, appears too abſurd even to deſerve a refutation?

SECT.

SECT. XXI.

Reaſons for wiſhing to try experimentally, as a mere matter of fact, the concluſion demonſtrated in the preceding Section.—Important uſe that may be made of ſuch an experiment.—Difficulty of finding a proper caſe for the ſubject of experiment, independent of all hypotheſes, and all appeals to conſciouſneſs.—Such a caſe pointed out by the aid of Mathematical reaſoning.—The reſult, according to the doctrine of Neceſſity, however modified, is inconſiſtent with plain matter of fact, with the common notion of Motive, and with the belief and expectation of thoſe who aſſert the doctrine of Neceſſity; yet is poſſible in itſelf, and the correſponding inference with reſpect to phyſical cauſes and effects is univerſally true, and is always expected to prove ſo.—Inference from this.

AS there cannot fail to be among men of ſcience a very great diſlike, and perhaps ſome diſtruſt, of ſuch general abſtra-

ſtract reaſonings as thoſe contained in the preceding ſection, with reſpect to the ſubject of this Eſſay; I conceive it may be worth while to conſider it in a different point of view; and, ſetting aſide all regard to the *impoſſibility*, which has been demonſtrated, of there being in motives ſuch a kind of ſtrength or force as is required and implied in the doctrine of Neceſſity, with the needful modifications, that the relation of motive and action is but an occaſional and ſeparable conjunction, and that the ſtrongeſt motive is always conjoined with its proper action, while the oppoſing weaker motive is ſeparated from the action to which it prompts, to inquire into the truth of ſome neceſſary inferences from this doctrine, conſidered merely as *matters of fact*; admitting, what perhaps never was admitted before, and certainly ought not to be admitted again in any argument, *that* to be *poſſible* which has been ſhewn to be *abſurd*.

Though I am aware of the cenſure and ridicule that may attend the attempt to reaſon on any ſubject *beyond* an abſurdity,

which is univerſally and juſtly regarded as an ultimate teſt in all ſcientific inveſtigations, I have a particular reaſon, beſides the general one, of wiſhing to ſhow, that the doctrine which I combat is experimentally falſe in point of fact, as well as abſurd, for endeavouring to do ſo on the preſent occaſion. I wiſh to ſhew, what I am confident is the caſe, and with due pains may be ſhewn, that thoſe who have moſt zealouſly maintained the doctrine of Neceſſity, and aſſerted in the ſtrongeſt terms their own moſt firm belief in it, and their hearty contempt for the opinions and underſtanding of ſuch as were of a different perſuaſion concerning it, were only confounded in point of words, but never deceived in point of thought, by their own reaſonings; that they always retained the ſame notion of the relation of motive and action, and of the independent activity, or ſelf-governing power, or liberty, of mankind, which other men have; and that they never ſeriouſly in their hearts believed their own doctrine.

Strange

Strange and impracticable as this attempt to demonſtrate mens moſt intimate thoughts, in ſpite of themſelves, may at firſt ſight appear; yet I think it muſt be admitted at once by every competent judge, that is, by every man of ſcience and candour, that it is fairly accompliſhed, when I demonſtrate certain neceſſary inferences from the doctrine of Neceſſity, which are poſſible, and even eaſy; which are ſtrictly agreeable to what takes place in all inſtances of cauſe and effect in phyſics; between which relation and that of motive and action, thoſe who maintain the doctrine in queſtion aſſert the analogy to be perfect; which are of ſuch a nature, that when expreſſed cautiouſly, and in general terms, they would be admitted as truths too obvious and generally acknowledged, either to admit of doubt, or to require any proof or illuſtration by experiment; and yet are ſuch as, when ſtated particularly, and without ambiguity, no aſſertor of that doctrine will admit as true, nor even as probable, nor even as doubtful, and as requiring to be put to the teſt of experiment.

The fairneſs and the certainty of this ſingular teſt of the moſt ſecret thoughts of men, will, I truſt, be eſtabliſhed by the following conſiderations.

It is univerſally admitted, as well by thoſe who deny as by thoſe who maintain the doctrine of Neceſſity, that belief or conviction is purely an involuntary act, operation, or ſtate, of the human mind; and that it is abſolutely and irreſiſtibly produced and determined by various kinds of proof or evidence, each of which has its own peculiar province. Thus, conſciouſneſs, perception, memory, teſtimony, intuition, (I mean the faculty by which we know the truth of geometrical and other axioms), reaſoning, induction, demonſtration, ſeverally command, with unreſiſted ſway, the belief of all men of ſound intellects, with reſpect to their proper ſubjects.

Of theſe different grounds of belief, none is conceived to be ſtronger than ſtrict reaſoning, whether in the form of complete and regular ſyllogiſms, or in the more

more conciſe form of mathematical demonſtration, founded on principles which are well underſtood, and unfeignedly believed. It is well known, that though it be always needleſs, yet it is always poſſible, and indeed eaſy, to reſolve a mathematical demonſtration into a chain of regular ſyllogiſms: but this is hardly ever done, becauſe ſuch a chain of ſyllogiſms muſt be three times as long as the demonſtration, and not more clear nor convincing. An author already quoted, whoſe moderation and candour will not be called in queſtion, has not ſcrupled to give it as his opinion, that a man who could admit the *major* and the *minor* propoſitions of a juſt ſyllogiſm, and yet deny the concluſion of it, would be a greater monſter than a man with two heads. The ſame may be ſaid, with equal truth, of one who ſhould admit the axioms of geometry, and all the ſteps of a demonſtration, and yet deny the concluſion of it. For my own part, I do not believe there ever exiſted ſuch a monſter; and ſure I am, that no man of ſcience will ever pretend that he has the misfortune to be ſuch a one.

one. If any perſon were ſo unhappily conſtituted, he muſt be for ever incapable of reaſoning, and unfit to be reaſoned with.

But it muſt be admitted likewiſe, that whenever the concluſion demonſtrated is abſurd and impoſſible, as, for inſtance, that two things equal ſingly to one and the ſame thing are not equal to one another, or that a part is equal to the whole; or like the two concluſions demonſtrated in the laſt ſection as neceſſary inferences from the doctrine at preſent in queſtion, that a force may be equal to another, and much greater than a third, and yet all three of them be equal to nothing; and that a force may be an hundred times as great as itſelf; then it cannot be believed, and the principles from which it was deduced muſt be given up. It is therefore only when the concluſion demonſtrated is poſſible, as well as conſiſtent with the principles maintained, that it is to be admitted; as, for inſtance, that a juſt balance will turn on putting into one of the ſcales a certain weight, with which it had

had formerly turned; or that a man of good ſenſe will act as prompted by a certain motive, when it is either altogether unoppoſed, or oppoſed only by a motive or combination of motives weaker than itſelf.

It can ſcarce be neceſſary to add, that when any error can be pointed out in a ſuppoſed demonſtration, no further regard is due to the concluſion of it. But it may be proper to mention, that a ſhort and ſimple piece of mathematical reaſoning cannot, without the greateſt injuſtice, and a degree of abſurdity, be pronounced erroneous, nor even diſtruſted, till ſome particular error is pointed out in it; and when this is done, there can be no further diſpute about it.

What ſhould we think of a man, who, on getting to the end of the 47th propoſition of EUCLID, ſhould inſtantly take the alarm at the concluſion of it, and, without pointing out any error, either in the axioms or the chain of reaſoning, that led to that concluſion, declare roundly, that

that he did not, and could not, believe that the ſquare of the hypothenuſe is equal to the ſum of the ſquares of the other two ſides of a right angled plain triangle?

Or what ſhould we think of a man who, after admitting the laws of motion as ſtated by NEWTON, ſhould deny at once the firſt corollary from them, and deny the poſſibility of the formation of a curvilinear orbit from the combination of a projectile and a centripetal force, and the acceleration of the motion of a heavy body falling unreſiſted, and the retardation of it when riſing from a projectile force; and who ſhould declare, that he thought it unneceſſary even to put ſuch concluſions to the teſt of experiment, as being notoriouſly and ridiculouſly falſe?

We ſhould ſcarce be intitled to ſay, that ſuch perſons were mad; for there have been no inſtances obſerved, ſo far as I know, of ſuch a madneſs. In the higheſt degree of madneſs, to be ſure, all the uſual connections of thought are broken, and the

the lunatic is incapable of thinking ſteadily on any ſubject even for a moment: in caſes of perfect ſtupidity or idiocy, the very faculty of thinking ſeems to be ſuſpended or loſt: and in both theſe caſes the power of reaſoning is of courſe at an end. But in the ordinary ſtate even of madneſs, the lunatic reaſons with juſtneſs, and ſometimes with admirable acuteneſs, though from very erroneous principles; which I conſider as a good phyſical proof, that certain relations among our thoughts are almoſt or altogether indefeaſible.

Now, what is the moſt candid or favourable judgement that we can form of the conduct of one, who, in point of reaſoning, acts more irrationally than an ordinary lunatic, by refuſing to admit as true, or even as probable, an inference which is unqueſtionably poſſible, and ſtrictly deduced from principles which he aſſerts? The moſt obvious and natural ſuppoſition ſurely would be, that he was either incapable of reaſoning, or elſe, that he did not believe the principles which he

aſſerted. And the moſt favourable opinion that I can form of ſuch a perſon is, that he did not underſtand the principles which he aſſerted, and that he had ſome other principles which ſerved to direct his judgement, tho' perhaps he had paid little attention to them. Indeed, unleſs ſomething of this kind interfered, it is as plainly impoſſible for a perſon who is acting *bona fide* to refuſe his aſſent to inferences juſtly deduced from principles which he acknowledged, as it is for a pendulum to begin, or to vary, or to ſtop its own motion.

Though every concluſion which is a ſtrictly neceſſary inference from a falſe principle muſt likewiſe be falſe, and tho' there are many concluſions from the doctrine of Neceſſity, which may eaſily be tried experimentally; yet it is a matter of great nicety to ſelect unexceptionable ſubjects of experiment for the purpoſe of proving, that the doctrine in queſtion is inconſiſtent with plain matter of fact, and repugnant even to the ſecret conviction of thoſe who moſt confidently aſſert it in words,

words, and who ſeem to have been moſt ſucceſsful in the ſingular attempt to deceive themſelves with reſpect to their own thoughts.

The circumſtances from which this nicety and embarraſſment proceed cannot fail to be underſtood from what has already been ſaid in the courſe of this Eſſay, concerning the reſemblance or analogy between the relation of cauſe and effect in phyſics and that of motive and action, and between the relation of motive and action according to the ſyſtem of Neceſſity, and this relation according to the popular perſuaſion of liberty; concerning the facility of framing hypotheſes to explain away the moſt obvious facts, to the ſatisfaction of thoſe who know ſo little of ſcientific reaſoning as to liſten to ſuch hypotheſes; and concerning the unſatisfactory and fruitleſs reſult of all appeals to conſciouſneſs with reſpect to what a perſon thinks or feels, whenever this comes to be a matter of diſpute.

The caſes of the various applications of

motives, which we ſhould moſt naturally think of trying experimentally, with a view to aſcertain whether the doctrine of Neceſſity, with the needful modifications already mentioned, be juſt or erroneous, are chiefly the following.

1. A motive applied by itſelf.

2. Two or more motives which concur or prompt to the ſame action applied at once.

3. Two or more motives of *unequal* force directly oppoſing one another; that is to ſay, prompting to different actions, which, either by nature, or by ſpecial compact when the motives are applied, are abſolutely inconſiſtent; ſo that the perſon may chuſe or determine which of them he will do, but can do but one of them.

4. Two or more motives of preciſely *equal* force directly oppoſing one another.

5. All

5. All motives whatever completely withdrawn.

A moment's reflection will be ſufficient to ſatisfy any perſon, that all theſe caſes may be tried experimentally times without number, as in fact moſt of them are tried every day, without tending in the leaſt to aſcertain the point in diſpute.

Thus, with reſpect to the three firſt of them, if the perſon acts according to the ſingle motive applied, or according to the concurrent motives, or according to the ſtrongeſt of the oppoſing motives, which it is to be expected he will do, no inference of any importance towards deciding the controverſy either way can be drawn from his conduct. For the viſible manifeſt reſult, which a ſpectator may obſerve and judge of, is juſt what was to be expected, either on the ſuppoſition of Neceſſity, or on that of Liberty: I mean, on the popular notion of Liberty as conceived by mankind; not on that notion of Liberty which has been imputed to them by thoſe who aſſert the doctrine of Neceſſity;

ſity; which notion is widely different from theirs, and plainly amounts to a denial of there being any ſuch relation between motive and action, that we can ever reaſon from the one to the other.

And with reſpect to the ſame caſes, if the perſon does not act as prompted by the ſingle motive applied, nor as prompted by the concurrent motives, nor as prompted by the ſtrongeſt of oppoſing motives; as well as with reſpect to the fourth and fifth caſes, if the perſon acts notwithſtanding the equal force of the oppoſing motives, or acts without any known or obvious motive; it is eaſy to contrive hypotheſes which ſhall reconcile the facts obſerved with the ſyſtem of Neceſſity, to which at firſt view they ſeem very unfavourable. The dulleſt metaphyſician can *ſuppoſe*, that the perſon acting in ſuch a manner had ſome ſecret motive for doing ſo, which either by itſelf, or along with the other acknowledged and apparent motives, was ſufficient to turn the balance and determine his will.

Nay,

Nay, ſtrange as it muſt appear to one who is unacquainted with this controverſy, ſuch a mode of reaſoning has been brought to the form of a regular ſyſtem; and it has been gravely maintained, that when a perſon acts in oppoſition to a motive ſingly applied, or in oppoſition to concurrent motives, or according to a weaker motive in oppoſition to a ſtronger, the fantaſtical deſire of ſhewing liberty is the motive of his action. Mr HUME's *Eſſays*, *vol.* 2. *Note F. on p.* 100.

I do not find, however, that Mr HUME has ever inquired into the nature of this fantaſtical deſire of ſhewing liberty; nor pointed out who is the author, or what is the ſource of it; nor inveſtigated what relation it ſtands in to the perſon acting; or whether it is in any degree dependent on him, or to what degree it is ſo. It would, however, be very fooliſh to argue againſt ſuch a ſyſtem: it plainly conſiſts of words, not of things; and words beget words, as BACON juſtly obſerves.

But the moſt diſagreeable circumſtance that

that attends the bringing of ſuch concluſions as the preceding from the doctrine of Neceſſity to the teſt of experiment is, that ſuch an attempt almoſt inevitably involves and requires ſome kind of appeal to conſciouſneſs. As the queſtion is not, Whether there be a relation between motive and action? but, What is the nature of that relation? we can ſcarce avoid paying ſome regard to what we feel or think in every caſe where we act, in whatever relation our action may ſtand to the motives of it; and ſuch thoughts of ours muſt mingle themſelves with our reaſonings; and in one reſpect they certainly ought to do ſo; not indeed with a view to the ſtrict deciſion of the queſtion, but with a view to give us real ſolid knowledge of the relation of motive and action.

But whatever knowledge ſuch a conduct may give an accurate and impartial obſerver, it tends rather to perplex than to decide the controverſy, and to make it appear difficult in fact, when it was only ſo in words.

Wher

When, after the moſt careful and impartial attention to my own thoughts, I give the faireſt and moſt accurate account of them, in certain circumſtances, that I can, I am but on equal terms with any other perſon, who, with equal profeſſions of impartiality and care, gives a directly contradictory account of his thoughts in ſimilar circumſtances. Nay, if he choſe to avail himſelf of the ambiguity of common language, or even employed it *bona fide* but careleſsly, he would have the advantage of me in point of plauſibility. But, ſetting aſide this conſideration, I do not ſee what claim to regard or credit one of us could have more than the other. An impartial perſon might ſuppoſe, that we were differently conſtituted: he might ſuppoſe, that one or that both of us were by nature or habit incapable of attending to our own thoughts with ſufficient accuracy; or that one or both of us were too keenly engaged in controverſy to be capable of attending to our own thoughts with ſufficient impartiality: nay, a ſpectator of an uncharitable diſpoſition might be apt to ſuſpect, that one or other of us

was prevaricating moſt vilely in the account which he gave of his own thoughts. Perhaps we might even find it difficult to avoid expreſſing, or at leaſt conceiving, ſome ſuch unfavourable opinion of one another. It is plain at leaſt, that the moſt confident and poſitive aſſertions which we could utter in contradiction to one another, could never amount to any proof, either of the judgement or of the candour and veracity of either of us, nor ever tend to decide the controverſy in the judgement of any impartial perſon of good underſtanding. Nor can there ever be a doubt, that it is incumbent on every perſon who undertakes to reaſon on ſuch a ſubject, to avoid with the utmoſt care every caſe or ſubject of experiment which may give occaſion to ſuch unphiloſophical contradictions, and ſuch illiberal ſuſpicions.

I truſt it will be evident, that this can be done only by ſelecting as the ſubject of experiment a caſe wherein the reſult according to the popular, and what appears to me the juſt, notion of the relation of motive and action, does not coincide with

with what muſt be the reſult according to the doctrine of Neceſſity, or what actually is the reſult in correſponding caſes of the relation of cauſe and effect in phyſics; and by taking care that the circumſtances of the experiment be ſuch, that every ſpectator may judge with certainty of the reſult, without there being occaſion to make any appeal to the thoughts or conſciouſneſs, that is, to the judgement, candour, and veracity, of the perſon on whom the experiment is made.

It would likewiſe be very deſirable that the circumſtances of the experiment were made ſuch as to exclude the poſſibility of framing new *hypotheſes*, to account for and explain away the reſult, to whichever of the ſides it may appear unfavourable. This, however, I believe, it is in vain to look for: the power of conjecture and imagination in ſuch caſes is very great; and that of vague and ambiguous words knows no bounds. Any perſon who may chuſe to exerciſe his ingenuity in arguing againſt an obvious fact, or in trying to explain it away, will eaſily contrive *hypotheſes* for his

purpoſe; and if theſe are expreſſed in vague and ambiguous terms, it muſt be a work of time and labour at beſt, or perhaps impoſſible, either to underſtand or to refute them.

With reſpect to the two firſt points required in the ſubject of experiment, that it be one wherein the reſult is not the ſame according to the doctrine of Neceſſity, and according to the popular notion of the relation of motive and action with independent activity or liberty in the agent; and that it neither require nor admit of any appeal to the conſciouſneſs of the perſon; which are the moſt important circumſtances; they may eaſily be accompliſhed with the help of mathematical reaſoning: but without this aſſiſtance, and by reaſoning only in vague and ambiguous terms, I doubt much whether it would be poſſible ever to attain that preciſion which is abſolutely neceſſary in deducing from the principles maintained, without regard to any other means of knowledge, ſuch inferences as may be brought

brought to the teſt of open and unequivocal experiment.

As to the other point, the contriving of *hypotheſes* to explain away an evident experiment or matter of fact, or to account for its being diametrically oppoſite to what it ſhould have been according to the doctrine maintained, though this cannot be prevented, it may be ſo guarded againſt, that ſuch *hypotheſes* can never produce any difficulty or embarraſſment.

For this purpoſe, I think the two following conſiderations may be ſufficient. In the firſt place, let it be remembered, that a new *hypotheſis*, contrived to account for the falſity of a neceſſary inference of an old one, and to explain away an obvious matter of fact, in order to avoid giving up a favourite opinion, is in the higheſt degree unphiloſophical, and in ſtrict propriety of ſcientific reaſoning, is not intitled to any regard or attention. In the ſecond place, let it be conſidered by thoſe even who wiſh to ſhew every poſſible indulgence to ſuch *hypotheſes*, that they may

may eaſily be brought to the teſt of experiment. For the concluſion which it is propoſed to try experimentally muſt be a ſtrictly neceſſary inference from the principles of the abſolute irreſiſtible force of motives, (though theſe may be ſeparated from their reſpective actions, in ſuch a manner that only the ſtrongeſt of two oppoſing motives ſhall be followed by its proper action), and of the incapacity of a perſon to act without a motive, as well as of the impoſſibility of a body reſiſting or preventing the change or effect correſponding to any cauſe applied to it, or ever changing without a cauſe; and this without any regard to any of the other real or ſuppoſed attributes, either of mind or body; of living perſons or of inanimate matter. Conſequently the concluſion muſt either be true, both with reſpect to the relation of motive and action and that of cauſe and effect in phyſics; or it muſt be falſe with reſpect to both theſe relations, if thoſe two principles take place in both; juſt as all the properties of a plane triangle are equally true of equilateral, iſoſceles, or ſcalene triangles; or as in

in an equilateral, as well as in an iſoſceles triangle, the two angles at the baſe are equal to one another. And if any perſon thinks he can aſſign a reaſon, conſiſtent with the principles juſt now ſpecified, for the concluſion not being true in the caſe of motive and action, we may know at once, by the eaſieſt and ſimpleſt teſt that can be conceived, whether the reaſon propoſed be juſt and ſolid, or a mere jargon of ambiguous words, ſuch as have long abounded on this ſubject; and this too without arguing about it even for a moment. We need only try whether it applies to the correſponding caſe of the relation of cauſe and effect in phyſics. If it does not, and if the concluſion be found true in the latter relation, and falſe in the former, there *muſt* be a difference between them, with reſpect to thoſe very principles from which the concluſion in queſtion was deduced as a ſtrictly neceſſary inference.

A caſe or inſtance of the application of a motive, having all the conditions requiſite for my preſent purpoſe, may, I think, be

be fairly and demonſtrably got at in the following manner.

Let two great equal oppoſite motives be applied to a perſon at the ſame time. In ſuch a caſe, according to the doctrine of Neceſſity, the perſon muſt remain inactive, having nothing to determine him, and being unable to determine himſelf to act according to one of the equal motives, rather than according to the other. This concluſion, however, is not verified by experiment; the direct contrary almoſt univerſally taking place. But this is eaſily accounted for, and reconciled to the doctrine of Neceſſity, by *ſuppoſing* that the perſon either diſcovered, or at leaſt fancied, ſome additional motive on one ſide or the other. Though this is a mere gratuitous hypotheſis, contrived to explain away an obvious fact, and therefore unworthy of any regard; yet, for reaſons already mentioned, it ſhall be allowed to paſs unqueſtioned. Nay, in order to make the argument as ſimple and unequivocal as poſſible, we ſhall conſider the caſe of a real additional motive, though a ſmall one, being applied on one ſide. And for the

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ſake of eaſy commenſurableneſs, we ſhall ſuppoſe this ſmall additional motive to be of the ſame kind with the great original oppoſite motives; for inſtance, the offer of money. But in this caſe it is plain, that the oppoſite motives are no longer equal; and, according to the doctrine of Neceſſity, that one with which the ſmall additional motive concurs *muſt* prevail. Now, it is an axiom of geometry, hitherto unqueſtioned, That if from unequals equals be deducted, the remainders *muſt* be unequal; and it may be added, that the difference between the remainders *muſt* be as great as that between the whole quantities had been. Let then the equal motives, that is, the great original oppoſing motives, be withdrawn at once from both ſides, as ſoon as the perſon has felt the influence of the minute additional motive, and made his choice accordingly: and let all the circumſtances of the caſe, and above all the doctrine of Neceſſity, be duly explained to him: he *muſt* immediately perceive, that the motive which determined his choice remains entire, unoppoſed, and conſequently in full force; and he *muſt* accordingly

dingly do the action required as certainly for that ſmall motive as he would have done it for the correſponding great motive applied by itſelf, or for the ſmall and great one together. For all motives being, as to him, irreſiſtible, any motive applied, and unoppoſed, *muſt* be followed by that volition, choice, determination, and action, to which it prompts.

This caſe, and the mode of reaſoning employed in arguing it, may be fully illuſtrated by the uſe of a very ſimple diagram, and by means of algebraical and even arithmetical notation; as, for example, in the following manner.

$$\underline{Z = 2} \qquad \underline{X = 100} \qquad \underline{Y = 100}$$

Let X and Y repreſent the forces of two equal oppoſite motives applied at once to the ſame perſon. Each of theſe forces we ſhall ſuppoſe equal to 100. According to the doctrine of Neceſſity, however modified, the perſon in ſuch a ſituation *cannot* act according to either motive applied, and *cannot* act without a motive; and therefore, if no other motive is applied to him,

muſt

muſt remain inactive. But the contrary reſult is *always obſerved* on trial, nay, is *always foreſeen* before any trial is made. This is accounted for, according to the doctrine of Neceſſity, by *ſuppoſing* that ſome additional motive, however ſlight, is *always* found or fancied on one ſide or the other. Let this *ſuppoſition* be admitted, and let Z repreſent the force of this ſmall additional motive; which we muſt conceive to be much leſs than X or Y, and for the ſake of eaſy calculation, we ſhall ſtate as only equal to 2; and ſhall admit that it concurs with X, in oppoſition to Y. Then, no doubt, according to the doctrine of Neceſſity, as now modified, X + Z being equal to 102, *muſt* be more than Y, which is but 100, and accordingly *muſt* prevail, and have their full effect, as if Y were not applied. But then it follows neceſſarily, that if the two great oppoſing motives of equal force be withdrawn at the ſame time, there *muſt* remain the additional motive Z = 2 on one ſide, and unoppoſed, (for aught that yet appears); which therefore *muſt* have its full effect, and be followed by the action to

which it prompts, as certainly as X would be if it were applied ſingly. But this very plain and ſtrictly neceſſary inference, though evidently poſſible, and perfectly analogous to what is known to take place univerſally with reſpect to cauſes and effects in lifeleſs bodies, I preſume will not be admitted as in the ſmalleſt degree probable, or as even worthy to be tried experimentally; and a new *ſuppoſition* will immediately be contrived to account for that neceſſary inference from the doctrine not being true as a matter of fact, and for thoſe who profeſs their belief in the doctrine not even expecting it to prove true.

It will be *ſuppoſed*, (and not altogether without reaſon), that the motives mentioned, the forces of which are denoted reſpectively by X, Y, and Z, are not the only motives applied to the perſon; that he *muſt* be conceived to be at the ſame time under the influence of ſome other motives, of a peculiar kind, and differing from the others in this reſpect, that they are not motives to action, but motives, reaſons, or inducements, to remain inactive;

tive; as, for inſtance, lazineſs, averſion to labour of any kind, the pleaſures of idleneſs, the advantage that may be expected by remaining inactive, or at leaſt by not acting either according to X or according to Y, &c. Such motives or conſiderations may well be ſuppoſed to have great influence with a perſon. They cannot indeed be ſuppoſed to concur with either X or Y in prompting to any action; but they may oppoſe either or both of them: they will always oppoſe that one which is likely to prevail; as, for example, X, when Z concurs with it; and in ſuch a caſe will concur with Y to that preciſe effect, and no more.

This *ſuppoſition* well deſerves attention; for it is in one reſpect juſt; there are ſuch motives, or principles of choice or determination, which may have influence; that is, according to which a perſon may reaſonably be conceived to regulate his conduct. But even theſe motives have no abſolute force as *cauſes* of choice, volition, or determination in the perſon, independent of his ſelf-governing power. And

And the *ſuppoſition* of their influence by no means takes away the objection to the doctrine of Neceſſity founded on the palpable falſity of the laſt neceſſary inference from it, but only removes it one very ſhort ſtep; and at the ſame time gives us an opportunity, by means of ſtrict mathematical reaſoning, to ſhew more clearly than has yet been done, that the notion of the ſuppoſed abſolute force of motives, is completely nugatory.

According to this laſt ſuppoſition, the former expreſſion and diagram were incomplete; and an important addition muſt be made to them, to expreſs the ſuppoſed force of theſe peculiar motives for remaining inactive; which always oppoſe action, and concur with any other motive that does ſo. The force of any ſingle motive of that kind, or of any number of ſuch motives concurring, may be repreſented by $\underline{V=m}$; and the diagram, when completed according to this ſuppoſition, will be as follows.

$Z=2$

$Z = 2$ $X = 100$ $Y = 100$

$V = m$

The proportion of V to X, Y, and Z, we cannot know, and therefore I ſtate it as equal to *m*; but we know that V *muſt* either be equal to Z, or greater than Z, or leſs than Z.

If V be equal to Z, then as X is equal to Y, X + Z muſt be equal to Y + V. According to the arithmetical illuſtration given, each ſum would be 102; and the force of the motives on each ſide being thus equal, according to the doctrine in queſtion, the perſon *muſt* remain inactive, juſt as he *muſt* have done if only X and Y had been applied, or as he *muſt* have done if no motives at all had been applied to him.

If V be greater than Z, (for example, if it be ſuppoſed equal to 3, while Z is but 2), X + Z = 102 *muſt* be leſs than Y + V = 103, and never *can* prevail over them, any more than Z could do over Y; and therefore

therefore the perſon muſt ſtill remain inactive.

If V be leſs than Z, (for example, equal to 1 while Z is equal to 2), then, no doubt, X + Z = 102 *muſt* be greater than Y + V = 101, and *muſt* prevail over theſe, and the perſon *muſt* act accordingly: but then let both X and Y be taken away, that is to ſay, the equals from the unequals, and the remainders *muſt* ſtill be unequal, and the perſon, according to the doctrine of Neceſſity, however modified, *muſt* act as he is prompted by Z, juſt as completely as if V were not applied, or as he *muſt* do if X + Z (unoppoſed), or X (ſingly), were applied to him. But, according to the *interpretation* of every part of the experiment, V *muſt* be leſs than Z; for X and Y are equal, and X + Z was found to be greater than Y + V.

Therefore, if the doctrine of Neceſſity, however modified, be juſt; that is, if there be in motives any abſolute force or ſtrength in determining the will or choice of a perſon, or any ſuch relation between them

them and the volitions and actions of mankind, that volition and action *come to paſs* in conſequence of them, independently of any ſelf-governing power in the agent, or any capacity in him of reſiſting them; juſt as changes in lifeleſs bodies come to paſs on the application of their reſpective cauſes, independently of any ſelf-governing power in the ſubject; a perſon *muſt* infallibly do, for any the moſt trivial motive, which added to any great one that was balanced by an equal oppoſite motive, was ſufficient to turn the balance, and determine the will, preciſely what he *muſt* have done for that great motive, either applied by itſelf, or applied along with an equal oppoſite motive, and that concurrent trivial motive.

Thoſe who have been accuſtomed to aſſert their belief in the doctrine of Neceſſity, may conſider here, before they proceed to particular inſtances, whether this important general inference coincides with *their* notion of the relation of motive and action, of the abſolute and irreſiſtible force of motives like that of phyſical cauſes, and

with *their* experience of the general character and conduct of mankind. They will not ſurely, nor *can* they conſiſtently with the character of men of ſenſe, and men of ſcience, and men of veracity, refuſe their aſſent to ſo plain and obvious a concluſion, without *firſt* pointing out ſome error in the very ſhort chain of ſimple mathematical reaſoning, by which it is deduced *neceſſarily* from their own fundamental principle.

Nay, if there were occaſion to reaſon on ſuch a ſubject with men incapable of underſtanding any kind of mathematical reaſoning, or having an inſuperable diſlike and diſtruſt of ſuch an application of mathematics, the concluſion which I propoſe to try experimentally might be explained and proved to them by phyſical illuſtration, with a degree of evidence and clearneſs little inferior to that of mathematical demonſtration; and yet of ſuch a kind that men of no more knowledge or underſtanding than we may reaſonably expect to meet with in common porters, ſhould fully and eaſily apprehend it, and

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ſee the force of it, as neceſſarily following from the principles aſſerted.

For this purpoſe, I ſhould require no other inſtrument but our old, though very unworthy repreſentative, the common balance.

Let us ſuppoſe any number of porters to be deſired to attend carefully to the nature, and ſtructure, and various motions, of a balance; to try it as often as they pleaſed, and in every way that they could think of; and let us ſuppoſe, that, after due attention on their part, and many careful trials of the balance, ſuch queſtions as the following ſhould be put to them ſeverally.

1. Whether they believe that the balance can turn of itſelf, with nothing in either ſcale?

2. Whether they belive it can prevent itſelf from turning, or in any way fail to turn, when a certain weight is put into

one of the ſcales, and nothing into the other?

3. Whether they believe it can turn either way, with juſt one pound, or juſt one hundred pounds, in each ſcale?

4. Whether they believe it will remain even, with an hundred pounds in one ſcale, and an hundred and one pounds in the other?

5. Whether they believe it will turn to that ſide where the greater weight was put?

6. Whether they believe it will turn to the ſame ſide, if an hundred pounds were taken out of each ſcale, and one pound only left in that ſcale in which it had originally been put?

It cannot be neceſſary to ſay, that experiments ſuch as theſe have been tried with balances times without number; that the reſult of every one of them is invariable; and that it is univerſally known, and

and foreſeen before the trial. I will venture to ſay, that if any porter were ſeriouſly to anſwer in the affirmative to any of the three firſt queſtions, or in the negative to any of the three laſt queſtions, he would inſtantly be pronounced inſane, as well by his own rude and ignorant brethren, as by the moſt intelligent and enlightened of mankind.

Next, let us ſuppoſe a company of merchants, all of them men of ſenſe, and of liberal education, and of extenſive knowledge, and of fair character in all their dealings, to be provided with a balance to all appearance of a very different conſtruction, and made of very different materials from thoſe which we are accuſtomed to uſe; that ordinary people ſuſpect it not to be a fair one, and alledge that in it ſometimes the greater, ſometimes the ſmaller weight preponderated; that when equal weights were put into the oppoſite ſcales, one of them always preponderated over the other; that they poſitively charge the merchants with having ſome ſecret way of turning the balance as they pleaſed,

ſed, or having ſome perſon, though unſeen, to do it for them; and at laſt refuſe to deal with them, in the way of buying or ſelling, by ſuch a balance, unleſs they will allow it to be fairly examined.

We ſhall ſuppoſe the merchants to treat all ſuch opinions and ſuſpicions with contempt and indignation; to laugh at the opinion, that any balance, or any thing whatever, could turn itſelf, as a palpable abſurdity, equivalent to ſaying that there might be an effect without a cauſe; and to ſpeak of the ſuſpicions of their honeſty as the vile ſuggeſtions of ignorance, envy, and malevolence; but yet, in order to ſatisfy the world, to ſhew, by a thouſand inſtances, that in their balance the heavieſt ſcale always went down, and that the ſuſpected balance was even ſo nice, and of ſo peculiar a conſtruction, (friction in it being almoſt annihilated, and the centre of gravity of the whole machine, even when loaded, coinciding with the centre of motion), that it would turn completely from the horizontal to the vertical direction, with the ſmalleſt difference of weight;

weight; as for inſtance, with a ſingle ounce, or with a ſingle grain, when there were 1000 lbs in each ſcale.

Their cuſtomers we ſhall ſuppoſe not yet to be quite ſatisfied, and, with the conſent and approbation of all the merchants, to try the experiment of putting 1000 lbs, carefully weighed, into each ſcale: it is found, that one ſcale not only preponderates, but goes down as faſt, and as far, as it would have done if there had been nothing in the oppoſite ſcale. The vulgar are aſtoniſhed, but the merchants are not in the leaſt diſconcerted. They immediately examine the deſcending ſcale, (without ever looking at the other), and ſhew, that there is in it, or about it, a ſmall quantity of duſt, which they reckon may weigh a grain or more; and they had already warned their cuſtomers, that the balance was ſo nice as to turn completely with a ſingle grain, or even leſs. The ſpectators immediately propoſe to aſcertain this point, and along with it the juſtneſs of the balance, by taking out the 1000 lbs from each ſcale, and attending

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ing to the reſult. But the merchants will not liſten to ſuch a propoſal: they ſay it is abſurd and fooliſh; and that it is treating them like children to appeal to ſuch an experiment; and, laſtly, we ſhall ſuppoſe, that, notwithſtanding all their remonſtrances, the experiment propoſed by their cuſtomers is tried; and that, on taking out the 1000 pounds from each ſcale, the balance immediately becomes and remains perfectly even.

What ſhould we think of ſuch a balance, and of ſuch merchants?

For my own part, I have not the ſmalleſt ſcruple to give it as my opinion, that if ever ſuch a caſe occurred, all mankind who were fit to judge of it would agree in their ſentiments on the two following points: Firſt, That the pretended balance was not a balance; that the turn of it was not produced or determined merely by the weights put into the ſcales, but that there was in the machine, or at leaſt ſomehow connected with it, ſome other principle from which the turn of it proceeded, either

ther wholly or partly: Secondly, That the merchants themſelves knew this perfectly well, and were acting *mala fide* in all that they ſaid or did about their balance.

Philoſophers who have maintained the doctrine of Neceſſity as conſiſting in the total want of any ſelf-governing power in perſons, and the irreſiſtible influence of motives; and who have aſſerted the perfect analogy between the relation of motive and action, and that of cauſe and effect in phyſics; and who have inſiſted on the illuſtration of their doctrine, from the compariſon of the balance as affording the fulleſt proof of their ſyſtem, and the beſt explanation of their meaning, as Dr PRIESTLY has done in the ſtrongeſt terms *; muſt conſider maturely what they are doing before they venture to deny the concluſion at preſent in queſtion, unleſs they can point out an error in the reaſoning by which it is deduced from

* Vol. 1. p. 11. 12.; vol. 2. p. 24. 25.

their own principles, and at the ſame time explain how it comes to paſs that a concluſion neceſſarily deduced from certain principles ſhould be always falſe in ſome caſes, and always true in others, the principles remaining the ſame in all: both which things I conceive to be impoſſible.

To deny the concluſion, (p. 432.-3.) without ſhewing an error in the ſhort and ſimple reaſoning that leads to it, would be equivalent to a renunciation of all pretenſions to the uſe of reaſon, at leaſt in ſcientific inveſtigations. To doubt of the truth of the reſult as a matter of fact when tried with the balance, would be ſuch wonderful ignorance of a well-known fact, as could not be believed of any ſet of men, but eſpecially of men well acquainted with the nature of the balance. To admit the concluſion with reſpect to the balance, and yet deny it with reſpect to the voluntary actions of perſons, ſtill aſſerting the ſame principles, to wit, the *inertia* of the ſubject, and the irreſiſtible influence of motives as well as of cauſes, would

would be ſtill worſe: it would bring into queſtion their veracity as well as their underſtanding.

I apprehend, therefore, that thoſe alone can expect credit for their ſincerity in the belief which they have profeſſed of the doctrine of Neceſſity, who admit my concluſion, and agree to try it experimentally.

After all, my concluſion is no more than what, if it had been expreſſed in general terms, without their knowing in what caſes it might be tried, or by what means the comparative force of the oppoſite motives was to be aſcertained before the laſt trial of them, every orthodox Neceſſarian would have admitted; as in fact many of them have done. None of them ſurely would ever think of diſputing that a perſon would or *muſt* act according to the ſtrongeſt of oppoſite motives; and that ſuch motives would commonly have their full effect as if unoppoſed.

Nay, if particular caſes were ſtated, of ſuch a nature that no appeal could be

made to open experiment with reſpect to the reſult in them, and every perſon would be left to judge for himſelf what the reſult would have been, I have ſtrong reaſons (from analogy) to believe, that my concluſion would be admitted by every aſſertor of the doctrine of Neceſſity.

I ſhall ſtate, firſt, one of the ſimpleſt caſes of this kind; in which the alternative is merely that of acting in a particular manner, or not acting in that manner, that is, remaining inactive. It is the caſe expreſſed mathematically by $Z - V$, (diagram, p. 431.): it correſponds in general phyſics to the caſe of a body under the influence of a force or cauſe of motion, which is at the ſame time oppoſed by friction; and with reſpect to the balance, if it be choſen as the ſubject of illuſtration, the correſponding caſe will be a weight put into one ſcale, and nothing left in the other. I preſume there can be no doubt, that if the force applied be leſs than the reſiſtance, or only equal to it, the body, or the balance, will remain at reſt; but that, if the force be greater than the reſiſtance,

ance, the body will move, or the balance will turn, according to the force or the weight applied.

Innumerable examples of the correſponding caſe of the application of motives may eaſily be found: I take the two firſt which occur, as they are both of ſuch a kind that the truth of the concluſion cannot be tried experimentally; ſo that every perſon is left to judge what it would be, from his own preconceived notion of the relation of motive and action, and of the abſolute force or influence of motives.—*Cæſar* had to chooſe whether he ſhould or ſhould not paſs the *Rubicon*; that is, begin or not begin a bloody and calamitous civil war: *Cato* had to chooſe whether he ſhould kill himſelf or not. We know what each of them did; we conceive that they had powerful motives for not doing ſo, but ſtill more powerful motives for doing what they did. It is conceivable, that the oppoſite motives in them reſpectively might have been equal, or that the contrary motives might have been the ſtronger; and in either caſe it will be admitted, on the principle

principle of the doctrine of Neceſſity, that *Cæſar* would not have paſſed the *Rubicon*, and that *Cato* would not have killed himſelf: but the motives on one ſide preponderating, they could not avoid chooſing as they did. Now, let us ſuppoſe the motives to inaction in both caſes to have been completely withdrawn, and at the ſame time an equal portion in point of force or influence to have been withdrawn from the motives to action, and of courſe the original difference on this ſide, or any force of motive, however minute, to have been left unoppoſed; muſt we conceive, that *Cæſar* and *Cato* would have acted as they did for ſuch a ſmall motive, juſt as a balance will turn, or a body will move, in the correſponding circumſtances?

Next, I ſhall conſider a different, but equally ſimple caſe, of the oppoſition of motives prompting to inconſiſtent actions, but where there can be no motive, or at leaſt none of any ſenſible influence, for remaining inactive. This caſe is expreſſed by the diagram, p. 426. or by the algebraical formula X + Z — Y; and corre-

ſponds

ſponds to the ſituation of a body in free ſpace, but under the influence of two oppoſite forces or cauſes of motion, and to the ſtate of the balance, (as nearly as the ſtructure of that inſtrument with reſpect to friction, and to the place of its centre of gravity, will permit), when weights are put into both ſcales. Let us ſuppoſe a truly honeſt freeholder to be ſolicited by two candidates for his vote, which he can give for only one of them; let us ſuppoſe that he wiſhes equally well to them both, and believes them equally deſerving of the honour and the truſt of which they are ambitious. If theſe conſiderations or motives are preciſely of equal force, it will no doubt be admitted, that he *can* vote for neither of them. Let us next ſuppoſe, that he has the additional motive of gratitude in favour of one of the candidates, as having formerly received favours from him. It will be admitted, I preſume, that this additional motive muſt turn the balance, and make him vote for his benefactor. Next, let us ſuppoſe, that he has no other motive whatever for voting for either of the candidates, but merely his gratitude

gratitude to one of them, neither of them being men of any peculiar merit. As there is no motive for refuſing to vote, but a ſtrong one againſt ſuch conduct, which would diſoblige two men; and as there is a motive for voting for one of them, and none for voting for the other, I preſume it will be admitted, that he *muſt* vote or act according to that motive.

Now, if this be human nature, it muſt be equally the caſe in honeſt and in knaviſh voters; and I think it may be tried experimentally in the following manner. Let two perſons ſolicit at the ſame time, but each for himſelf ſeparately, the vote of ſome worthy burgeſs of ſome rotten borough, which vote can be given for only one of them: Let the ſolicitations be properly made by the offer of an equal bribe from each candidate.

The worthy burgeſs, as he cannot vote for both of them, muſt either refuſe his vote to both, or promiſe it to one of them. If he refuſes it to both, let one of them

offer him a very ſmall additional bribe. He muſt then promiſe his vote to the candidate who does ſo. But whenever he has made his choice, and given his promiſe, whether from the conſideration of an additional bribe, or of ſome other motive, not diſcoverable, on one ſide, then let the equal bribes or motives on both ſides be withdrawn. There will then remain the additional motive (the influence or efficacy of which is already aſcertained) for giving his vote to one of the candidates, either abſolutely unoppoſed, or oppoſed only by ſome inconceivable reaſon for not voting at all; which conſideration, by the previous ſteps of the experiment, is already aſcertained to be leſs in force or influence than the motive which is now left for voting on one ſide. Will he vote accordingly, or not? If he does, it is plain that a practical and œconomical uſe, of great importance in all free governments, may be made of this principle of human nature, which I claim the ſole merit of diſcovering.

Laſtly, I ſhall conſider the caſe where

the motives for not acting in either of the ways required are very great, almoſt or perfectly equal to either of the great motives which oppoſe one another, and infinitely greater than the minute additional motive which is found to turn the balance. This is in truth a very common caſe; it occurs in every example of a ſale by auction, where there are two bidders for the thing to be ſold. It correſponds to the caſe of a body under the influence of two very great oppoſite forces, one of which is but very little greater than the other, and where there is alſo much reſiſtance, from friction or other ſources, to the motion of the body in the direction of either of the forces. And it correſponds to the caſe of a balance having much friction, the centre of gravity very low, and great weights very nearly equal in both ſcales.

If a man be offered L. 50 for a horſe, or L. 50,000 for an eſtate, which he is willing to ſell for an adequate price, but not abſolutely obliged to ſell at any price that he can get; and if he is convinced that the prices

prices offered for his horſe and for his eſtate, reſpectively, are fully adequate, it is to be ſuppoſed he will conclude the bargain. But if he have the ſame offer from two different perſons, it muſt be conceived, that he could not ſell his horſe or his eſtate to either of them, for want of a motive to determine his choice. But then let a ſingle guinea more be offered on either ſide, and the balance will be no longer even, and his choice muſt be determined on that ſide. Then let the great equal offers on each ſide be withdrawn at once, and only the offer of the guinea on one ſide be left, that it may appear whether it will turn the balance or not, in ſpite of the value the man may be ſuppoſed to ſet on his property; juſt as a balance will turn with any ſmall weight put in either ſcale, with which it had turned when both ſcales were greatly loaded; or as a great weight may be dragged on the ground by any force that was ſufficient to drag it in that direction, along with a much greater, which was oppoſed by one equal to itſelf.

All theſe caſes I have conſidered with a

degree of minuteneſs which will probably appear tedious and unneceſſary: the object of it is to ſhow, in the ſtrongeſt poſſible light, the difference between the notion as well as the reality of *being done for the ſake of a motive*, and barely *coming to paſs in conſequence of a phyſical cauſe*; and to point out the extravagant and ridiculous abſurdity, or at leaſt incongruity with the *univerſal* notion of mankind, whether philoſophers or vulgar men, that reſults, even before any experiment can be made, from ſuppoſing the voluntary determinations and actions of men to come to paſs on the application of motives, as phyſical effects do on the application of their cauſes, without any ſelf-governing power in perſons, any more than in lifeleſs bodies, or any means of preventing the influence of the motives, any more than of the phyſical cauſes applied. I do not, however, make any appeal to conſciouſneſs on this point: I ſtate the neceſſary conſequences of the ſuppoſition of ſuch influence of motives; and leave to thoſe who may think it neceſſary the labour

bour of trying thoſe inferences experimentally.

It may be proper to mention that theſe inferences are equally neceſſary on the ſuppoſition of the conſtant conjunction as on that of the occaſional and ſeparable conjunction of motive and action: they are deduced from the ſuppoſition of the abſolute irreſiſtible force or influence of motives.

It muſt be obſerved, too, that as they do not in any degree depend on the ſuppoſed immediateneſs or remoteneſs either of the conſtant conjunction or of the irreſiſtible influence of motives, they cannot be ſet aſide by any ſuppoſition concerning the number or the nature of the intermediate ſteps between the firſt application of them and the ultimate viſible reſult in action. Juſt as in the caſe of the balance, or of any lifeleſs body, there may be any ſuppoſeable number of links or ſteps between the cauſe and the effect; ſtill, however, if the conjunction at every ſtep be conſtant, that of the firſt with the

the laſt *muſt* be ſo too: if the influence at every ſtep be irreſiſtible, that of the firſt on the laſt *muſt* be ſo too *.——To mention the various circumſtances of apprehenſion, judgement, will, effort, thought of every kind, which are peculiar to perſons, and which may be conceived to account for the difference in the caſe of perſons and in that of lifeleſs bodies, requires, in the firſt place, ſome appeals to conſciouſneſs; and, in the ſecond place, implies the uſe of many vague and ambiguous terms; and, laſtly, it is in fact, though not in words, an acknowledgement that the conjunction of motive and action is not conſtant, but occaſionally ſeparable; and a ſpecification of the ſteps of the proceſs, or ſeries of events, where the conjunction in queſtion is broken, where the influence of motives is found not to be irreſiſtible, and where the aid of another principle of change is required.

Suppoſing that all theſe inferences which I have drawn from the principle of the

* Vide p. 84. 85. 86. 232. 233.

inertia

inertia of mind as well as of body, and the irreſiſtible influence of motives, as well as of phyſical cauſes, firſt on the ſuppoſition of the *conſtant conjunction*, ſecondly on the ſuppoſition of the *occaſional and ſeparable conjunction* of cauſe and effect, and of motive and action, are ſtrictly neceſſary conſequences of that principle; it muſt, I think, be admitted, that they have all the other qualities and conditions which are ſpecified, Sect. IV. p. 128. and 129. to which I here beg leave to refer, as it is needleſs to repeat what is there ſtated ſo particularly; and I truſt they will be thought by every attentive and candid reaſoner to juſtify and eſtabliſh the propoſitions aſſerted p. 125. 126. 127. and 130. 131. 132. concerning the import of the notion of motive, or "that for the ſake "of which," and the univerſality of that notion among philoſophers as well as the vulgar, and its being indefeaſible even in thoſe who profeſſed to have no belief and ſcarce a notion of that principle of change, the ſelf-governing power of perſons, which appears to be always implied in the notion of motive.

If

If any perſon can ſhew that my ſuppoſed neceſſary inferences from that principle are really not ſo, I ſhall frankly give up my argument, and acknowledge his ſuperiority in reaſoning; though I own I cannot alter my opinion as to the ultimate point at iſſue, which appears to me a ſelf-evident truth, which nothing but vague analogical reaſoning, and the careleſs uſe of ambiguous terms, could ever have brought into queſtion.

If, contrary to my expectation, any aſſertors of the doctrine of Neceſſity ſhall admit my ſeemingly neceſſary inferences from their own principle, as appearing to them true, or at leaſt highly probable, with reſpect to living perſons as well as with reſpect to lifeleſs bodies; and if it ſhall appear, that their actual conduct in ſimilar circumſtances has correſponded to ſuch admiſſion, and to my inferences, I ſhall with much pleaſure acknowledge their candour and ſincerity in their reaſonings, and their profeſſions of belief, and ſhall be glad to ſee the truth of their principle,

principle, and of my inferences from it, fairly aſcertained by experiment.

But if any of them, without pointing out any ſuch error in my reaſonings as may ſhew that my inferences are not neceſſary conſequences from the principle aſſerted, ſhall deny thoſe inferences, and ſtill hold faſt the principle, I *muſt* conſider them as ſo ſtrangely deficient in the faculty of reaſoning, as to be incapable of any ſcientific inveſtigation; and if they admit the inferences with reſpect to lifeleſs bodies, which implies that they underſtand them, and ſee the force of the reaſonings which lead to them, and yet deny them with reſpect to living perſons, ſtill aſſerting with reſpect to both that ſimple principle from which alone, without regard to any other circumſtance or property either of mind or body, thoſe inferences are drawn, then I *muſt* conſider them as ſo deficient in candour and ſincerity as to be unfit to be reaſoned with.

SECT. XXII.

Summary of the Dilemma.—Ultimate concluſion of the argument with reſpect to the general nature of the difference between the relation of Motive and Action and that of Cauſe and Effect in Phyſics.—Reaſons for not attempting in this Eſſay the inveſtigation of the particulars relating to the Self-governing Power in Perſons.—Impoſſibility of doing it without appealing to Conſciouſneſs and Common Senſe.

THE relation of motive and action has now been conſidered on two directly contrary ſuppoſitions, one or other of which *muſt* be true. It *muſt* be either a *conſtant conjunction*, as that of cauſe and effect in phyſics ſeems to be, or it muſt be an occaſional and ſeparable conjunction.

Each

Each of theſe ſuppoſitions has been conſidered along with the fundamental principle of the doctrine of Neceſſity, namely, that the influence of motives is irreſiſtible, like that of phyſical cauſes; and that there is no ſelf-governing power in living perſons, any more than in lifeleſs bodies.

Both thoſe ſuppoſitions with reſpect to the relation of motive and action, taken along with that principle, imply various neceſſary conſequences, ſome of which are falſe, and others abſurd.

Therefore that principle *muſt* be falſe.

But the direct contrary of what is falſe *muſt* be true.

The direct contrary of that principle is, that the influence of motives is not irreſiſtible; and that there is in living perſons a certain ſelf-governing power: and this *muſt* be true. Which was to be demonſtrated.

It will be obſerved, that in the preceding argument care has been taken to conſider only the original motives, or firſt principles of action, applied to a perſon in any caſe, and the ultimate viſible reſult or overt act proceeding from them; without regard to any intervening circumſtances, ſuch as the proceſs of thought, which we know to be interpoſed between the motive applied and the overt act conſequent upon it. Various ſteps in the intervening proceſs of thought may be diſtinctly conceived and ſpecified, ſuch as apprehenſion, deſire, judgement, choice, preference, will, effort, and poſſibly many others, for which it is not eaſy to find unexceptionable, that is, unambiguous names. It would be natural and reaſonable to inquire in which of theſe ſteps, or in how many of them, the exertion of the ſelf-governing power is required. Nor would there be any difficulty in anſwering

ſuch

ſuch queſtions, if appeals to conſciouſneſs and to common ſenſe were admiſſible; which here they are not, both as being fruitleſs, and as being inconſiſtent with the plan of this Eſſay. Beſides, many of the terms expreſſing thoſe operations of thought are ſo vague and ambiguous, as almoſt certainly to perplex and fruſtrate any reaſonings in which they are employed. Nor is it neceſſary for the purpoſe of this Eſſay to enter into ſuch diſcuſſions. It appears by the unequivocal reſult, the overt act, that the exertion of the ſelf-governing power is interpoſed between the motive applied and the action following upon it, and referred to it.

Nay, if any perſon ſhould chooſe, as ſome philoſophers ſeem inclined to do, in defiance of the common and the proper uſage of language, to employ the term *Motive* to denote, not merely the principle of action, ſuch as appetite, paſſion, deſire, &c. uſually called the motive, but all the circumſtances preceding the overt act, it would make no difference with reſpect to my concluſion: for it would appear,

pear, that in that maſs or ſeries of things and thoughts, confounded together under one name, there were both the principle of action, commonly called the Motive, and the exertion of the ſelf-governing power ſubſequent to it, and preceding and eſſentially neceſſary to ſuch overt actions as men uſually perform. For though the power of words be very great, in confounding our reaſonings and fruſtrating our reſearches, it has no influence at all on the things about which we reaſon; nor does it even prevent us from perceiving their properties and their relations, if, without regard to the words which we employ, we attend ſtrictly to the things themſelves.

Though I will not, any perſon who chooſes, and who has ſufficient confidence in his own power of reflection on his thoughts, and in his own candour on this ſubject, may eaſily apply my dilemma, and my mathematical reaſoning, to any ſtep of the proceſs of thought which intervenes between the motives applied and the overt act produced; for example, to the judgement, choice, or will of the perſon

ſon acting; and he will ſoon find, that in the very notion of ſome of them there is implied the ſeparability, and the very frequent ſeparation, of ſome of the motives or ſuppoſed cauſes from their ſuppoſed effects; and in others of them, a very different relation from that of irreſiſtible influence of the ſuppoſed cauſes, or the ſuppoſed effect ſimply coming to paſs on the application of the motives. And, inſtead of the analogy of the motion of a lifeleſs body, which correſponds or contraſts ſo well with the voluntary movement of a perſon, he may take, for the firſt part of the Dilemma, the perception of colour; which perception is a mere modification of thought, as much as judgement, will, or choice; but which being involuntary, comes to paſs irreſiſtibly, on the application of its exciting cauſe or cauſes: and for the ſecond part of the Dilemma, he will have at hand the familiar analogy of the balance. And if he reaſons ſtrictly, and obſerves attentively, he will perceive the difference between the turn of a balance from the weights put into the ſcales, and the choice, judgement, or will of a perſon,

ſon, from motives applied to him, as well as that between the ſame turn of a balance and the overt act of a perſon.

The ſelf-governing power of perſons, the reality of which I conceive to be demonſtrated on phyſical and mathematical principles in this Eſſay, appears to me a curious and important principle in human nature, and one that well deſerves particular inveſtigation. Though many philoſophers have thought fit to deny the exiſtence of it, yet it has not altogether eſcaped the attention either of philoſophers or of the vulgar: it is well known in common language by the name of FORCE OF MIND; a phraſe which I find is uſed in the very ſame ſenſe by mankind in general, and by the aſſertors of the doctrine of Neceſſity; as appears by the inſtances to which they apply it, and by their never falling into croſs purpoſes or miſunderſtanding in their converſation when they uſe it. Many juſt and intereſting obſervations concerning it may eaſily be collected, by accurate obſervation of the characters and conduct of men, and from the

the writings of poets, hiſtorians, and philoſophers. Such obſervations, properly arranged, will lead us gradually to a more diſtinct and accurate knowledge of its nature. We may become acquainted with its varieties and its modifications, and with ſome of the cauſes of theſe; we may find what ſhare it has in all the operations of thought, ſomewhat even in ſenſation, more in judgement, in memory, in imagination, in reaſoning, in the common conduct of life, in virtue, and in vice. We may find it to be one of the moſt valuable poſſeſſions that man enjoys, and one that by his own management he may improve, or debaſe, or almoſt loſe. We may find the knowledge of this power ſubſervient to the inveſtigation of the nature of other principles of change, which it is the object of philoſophy to aſcertain. But as this inveſtigation cannot be conducted on phyſical and mathematical principles, I muſt not enter on it here; but it may be the ſubject of another Eſſay.

APPENDIX:

CONTAINING

Objections made to the preceding Eſſay, and Anſwers to them.

VERBA GIGNUNT VERBA.

Bacon.

"I Communicated this Eſſay to a friend that I knew had early imbibed the principles of the Neceſſitarians, requeſting him to give me his opinion of it. He ſent me the following remarks, numbered at my deſire, and gave me leave to do as I pleaſed with them. But he requeſted that

I ſhould not publiſh his name; becauſe he did not think either the obſervations or himſelf of ſuch conſequence as that there could be any propriety in announcing their author.

1. I believe the doctrine of the Neceſſitarians is, That human actions, or the acts of the will which prompt them, depend as much as any other events on cauſes; and that theſe cauſes are to be found in the nature of the mind, and in thoſe perceptions, ſentiments, and opinions, which ariſe in it.

2. The phyſical conſtitution of the mind, on which its exiſtence, and the performance of its operations, depend, muſt naturally be ſuppoſed to contain the proper phyſical cauſe or cauſes of the acts of the will, as well as of every other mental operation: For I think we cannot conceive a change to take place in any ſubſtance, without ſuppoſing that there is a phyſical cauſe for it in the nature of the ſubſtance. But this conſtitution we have no faculties for examining. The perceptible operations

tions of the mind, however, or the proceſſes of thought which attend on volition, may be conſidered as exciting cauſes of the acts of the will. If there is any thing contingent in theſe proceſſes of thought, or if the acts of the will are not conſtantly conjoined with them, it is evident, that however conſtantly conjoined the acts of the will be with their proper phyſical cauſe, if that phyſical cauſe is only attended with its effect when ſtimulated by ſomething contingent, the doctrine of the Neceſſitarians muſt be erroneous. If, on the other hand, proceſſes or trains of thought are conſtantly conjoined with the acts of the will, and there is nothing contingent in thoſe trains of thought, it appears to me, that the doctrine of the Neceſſitarians muſt be well founded; as, in that caſe, the relation of conſtant conjunction muſt take place between the acts of the will and trains of thought which invariably precede them.

3. It has been hitherto thought by the Neceſſitarians, that every volition is very obviouſly the reſult of a train of thought; and

and that the relation of conſtant conjunction is very perceptible in ſuch trains of thought, at leaſt as far as it is neceſſary to trace back the ſteps of them. I underſtand the object of the Eſſay is, to ſhow, in the following manner, that abſurdities reſult from this hypotheſis. The doctrine of the Neceſſitarians is ſuppoſed to be, That every apprehenſion and deſire of attainable good, or, in the language of the Eſſay, every motive, is attended with an influence on the will, commenſurate to the intenſity of ſuch deſire; and then, by having recourſe to the known laws of phyſics, it is proved, that inſtead of the human actions which do happen, others the moſt abſurd and extravagant would neceſſarily reſult from the oppoſite and combined effects of certain of ſuch motives.

4. But if it can be ſhown, that, according to the doctrine of the Neceſſitarians, the will is not, and need not be, expoſed to ſuch combinations or oppoſitions of influences, it ſeems to me to follow, that

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the argument in the Eſſay fails in its foundation.

5. The Neceſſitarians maintain, That the will is invariably determined by the judgement of the underſtanding, or the laſt ſtep in the train of thought previous to volition; and that this judgement is involuntary; and that no apprehenſion and deſire of attainable good has any influence on the will, till the underſtanding decides on its preference, or on the expediency of attempting the purſuit of it. It is therefore a miſtake to have ſuppoſed, that, according to the Neceſſitarians, every apprehenſion and deſire of attainable good had a determinate influence on the will. I believe there is no Neceſſitarian that would require any demonſtration or argument to be convinced, that ſuch ſentiments occur every day without producing any effect whatever on the will; and that accordingly there is no conſtant conjunction between them and human actions.

6. Again, I believe it will not admit of diſpute, that the deciſions of the underſtanding

ſtanding are involuntary. It ſeems to be admitted in the Eſſay, that belief, which is a judgement of the truth or falſehood of a propoſition, or of an event, is involuntary; and I can ſee no reaſon for doubting, that an opinion of what is preferable, or otherwiſe, is equally involuntary. The former kind of judgements is indeed more uniform and ſteady than the latter, which varies according to the ſtate of a perſon's health, or other circumſtances; but there is no reaſon for eſteeming them to be leſs involuntary than the former.

7. Neither will it admit of diſpute, that a judgement will never be pronounced by a perſon in health, in favour of two purſuits at one and the ſame time, that are incompatible, or admit only of combinations which are inconſiſtent with each ſeverally.

8. Unleſs, therefore, the Neceſſitarians are under the neceſſity of admitting, that the involuntary judgement of the underſtanding is contingent, or proceeds upon

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a train of thought, ſome ſtep of which is contingent, the Eſſay ſeems to fail in its object; ſince, according to the Neceſſitarians, the act of the will depends on an operation of the underſtanding, which is itſelf involuntary, and excludes all thoſe abſurd combinations of influence alluded to in N° 3.

9. The queſtion, therefore, turns on the nature of the operations of the underſtanding. If the Neceſſitarians muſt yield, that every apprehenſion and deſire of attainable good muſt have an influence on the underſtanding, in a manner perfectly ſimilar to that of forces in phyſics, in order to be intitled to maintain, that its operations proceed by immutable laws; and that the relation of conſtant conjunction takes place among them, the ſubſtance of the argument in the Eſſay would, I think, ſtill remain ſolid, notwithſtanding what has been remarked. It appears, however, to me very clear, that the laws of the operations of the underſtanding are immutable; that the relation of conſtant conjunction is univerſally acknowledged

by mankind to take place among theſe operations; and that the influence of our deſires for attainable good on the deciſions of the underſtanding, reſpecting the purſuit of them, though as certain and, ſtrictly ſpeaking, uniform as that of forces in phyſics, is ſubject to extremely different laws.

10. I imagine all men will acknowledge that a perſon will form exactly the ſame judgement to-day, for inſtance, that he did a twelvemonth ago, if he is circumſtanced in preciſely the ſame ſituation, viz. having perceptions, appetites, expectations, and diſcernment, perfectly ſimilar to thoſe which he then poſſeſſed; and it does not appear to me poſſible that this perſuaſion can be otherwiſe accounted for than from a belief, founded in conſciouſneſs, of the immutability of the laws of the operations of the underſtanding, and of one of thoſe laws being a conſtant conjunction in the ſteps of the trains of thought which precede the judgements of the underſtanding: ſo that we are ſure that ſimilar effects will always reſult from ſimilar cauſes

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in the mind, as well as elſewhere; or, if a different mode of expreſſion is preferred, that ſimilar events will enſue in the mind from ſimilar preceding circumſtances. We cannot, as I believe an able writer has obſerved, trace back the rout of the die in the dice-box, and the train of cauſes and effects by which a particular face of it comes at laſt to caſt up; but we have no doubt of the conſtant conjunction of the whole from the firſt impulſe it receives, till it ſettles on the table; and I think we have as little doubt of the ſame relation pervading the trains of thought that iſſue in judgements of the underſtanding; though theſe trains are too fleeting and various, and the memory too imperfect a faculty, to admit often of our tracing them back with accuracy.

11. The total want of analogy between the influence of our appetites upon the judgement and of forces in phyſics, appears alſo to me to be ſo ſtriking, that it is ſcarcely requiſite to make any remarks upon it. The deſire of earning a guinea by going a mile weſtward, can no more com-

bine with a deſire to gain half a guinea by travelling a mile ſouthward, in forming a judgement, that it would be eligible to travel a mile in the diagonal ſouth-weſtward, than phyſical forces applied to make a ball move with different directions, ſouth and north, could combine of themſelves to make it move to one of theſe points. The intelligence of the mind renders the combination impoſſible. At the ſame time, no man can ſay but that he is as certain that the porter, if there is no other appetite in the caſe, will decide upon the preference of travelling the mile weſtward for the guinea, as that a ball impelled by equal forces ſouthward and weſtward will move ſouth-weſtward. If it is aſked, What becomes of the effects of the appetite for the half-guinea? I anſwer, That it has had all the effects that by the immutable laws of the underſtanding it was fitted to have. It was felt, obſerved, its inferiority to a deſire, the gratification of which was incompatible with it perceived, that gratification judged preferable to it accordingly; and it then probably ceaſed to exiſt, and was forgotten. It is not eve-

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ry train of thought that is conſtantly conjoined with volition, though volition be conſtantly conjoined with a previous train of thought; nor is it requiſite that every train of thought that might terminate in volition muſt be prevented from doing ſo by a ſpontaneous exertion of a ſuppoſed ſelf-governing power: for, independently of theſe judgements, which I have ſaid involuntarily put a period to them, or at leaſt to our attention to them, we know that any one of a thouſand external circumſtances may occur, and, either contrary or agreeable to our inclination, monopoliſe our attention ſo completely as at once to put an end to any of thoſe trains of thought that formerly engaged us, and might have terminated in action. After turning the ſubject every way in my mind, I cannot diſcover the ſmalleſt uſe for a ſuppoſition, that a ſelf-governing power was neceſſary to enable the underſtanding, poſſeſſed as it is of intelligence for perceiving the incompatability of two purſuits, to judge the one eligible, without abſurdly combining it with the other. The ſufficiency of the underſtanding for this operation,

ration, ſeems to be the natural reſult of its intelligence, which differences that faculty ſo infinitely from every thing that is expoſed to the influence of phyſical force; and ſurely it is not meant in the Eſſay to prove, that intelligence cannot be ſubject to the relation of conſtant conjunction.

12. It is ſaid in the Eſſay, "That the "action not always being proportioned to "the motive, or correſponding to it in "point of quantity, is equally inconſiſt-"ent with the principle of conſtant con-"junction, and with the ſuppoſition of "mere chance, or the want of power in "the being who acts to allow or to pre-"vent the full effect of the motive." This appears to me to be a miſtake. Even in phyſics, an effect may be conſtantly conjoined with a circumſtance, which is in one ſenſe its cauſe, without being the meaſure of it. The exploſion of a mine of gunpowder cannot meaſure the quantity of fire that kindled it. The malignity of the ſmall pox is no meaſure of the quantity or quality of the contagious matter employed to give the diſeaſe. The contraction of a muſcle

muſcle is no meaſure of the ſtimulus applied to produce it. Human actions do not admit of degrees that bear proportions to the degrees of our appetites. I need not make any remarks on the latter part of the paſſage. I think the involuntary opinion of the underſtanding always has its full effect on the will.

13. I could have wiſhed that the Eſſay had contained ſomething more detailed with reſpect to that ſelf-governing power the exiſtence of which it is the object of it to eſtabliſh. The terms *option* and *diſcretion*, which are attributed to this power when acting, as is ſuppoſed it often does, without motives, or in oppoſition to motives, or in oppoſition to ſome, and in favour of others, and the character aſcribed to it, of being vanquiſhed by appetites or feelings of a certain intenſity, leave the reader very much at a loſs what to underſtand by it, and how to diſcriminate its functions from thoſe of the underſtanding. One ſhould be apt to think, from ſome of theſe terms, that it was a faculty which decided according to reaſon and argument;

gument; and from the laſt circumſtance, its yielding to feelings of certain intenſity, that combinations of theſe feelings would, according to the doctrine of the Eſſay, frequently, or at leaſt ſometimes, lay men under the neceſſity of performing actions as abſurd as thoſe which are ſuppoſed to be the reſult of the doctrine of the Neceſſitarians.

14. I have no occaſion in theſe remarks to concern myſelf with the fact, which poſſibly may prove to be important, and which I think the Eſſay eſtabliſhes, that the relation between cauſe and effect is different from that between motive and action. It is ſufficient for my argument, if a relation ſubſiſts between what is involuntary in the train of thought in the mind and the acts of the will, as conſtant and certain as that of cauſe and effect.

15. I alſo acknowledge, that ever ſince I firſt ſtudied pneumatology, I have been perſuaded, that we truly poſſeſs a notion of power derived from the conſciouſneſs of our mental efforts; at the ſame time I

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muſt think, that theſe efforts, or the faculty that makes them, are in general under the direction of the underſtanding, which again is under the neceſſity of examining what is ſuggeſted for its conſideration, and of forming an opinion as to what purſuits appear at the moment moſt conducive to our happineſs.

16. I ſhall only further obſerve, that though I may have been unſucceſsful in pointing out any defect in the argument in the Eſſay, my remaining unconvinced by it is ſome ground of ſuſpicion againſt it, ſince I can diſcover nothing in my ſituation or ſentiments that ſhould lead me to ſuſpect I had imbibed any invincible prejudice againſt it; and if it is ſolid, I ſhould think, that, notwithſtanding any degree of prejudice, it ought to produce infallibly the ſame degree and facility of conviction that reſults from a theorem in geometry. I confeſs alſo, it ſeems to me very clear, that if the acts of the will are not determined by the judgements of the underſtanding, but by a ſelf-governing power, which *may* act, and, if I recollect

right, is ſuppoſed to often act without motives, and in oppoſition to all motives, the human race, inſtead of being moral agents, would ſometimes at leaſt be more diſorderly than any madmen; their manners could be regulated with any degree of certainty by no laws; the preſcience of God Almighty could not trace their actions; and even his omnipotence, unleſs he altered their nature, could do nothing more for them than make a vaſt bedlam to contain them. I do not aſſert, that theſe conſequences, even though proved to be juſt, can impeach the validity of a demonſtration; but, on the other hand, I muſt think, that the apprehenſion of ſuch conſequences is ſufficient to juſtify a ſuſpicion, that there lurks ſome inaccuracy in it."

Obſervations

Obſervations on the preceding Remarks.

IN the preceding remarks, there are many things hard to be underſtood; ſome things that may be underſtood ſeveral different ways; ſome that I cannot underſtand any way; very few, if any, that I can think ſtrictly fair, or pertinent to my mode of reaſoning; and certainly none which I can regard as valid objections to my argument, and ſuppoſed demonſtration.

It may appear, therefore, a ſtrange deviation from what I have repeatedly mentioned, in the courſe of my Eſſay, as my reſolution with reſpect to any ſuch objections that may be made to it, to pay any regard or give any anſwer to them.

My reaſons for this deviation are,

Firſt, That I think myſelf under ſuch peculiar obligations to the author of the

remarks, for the trouble he has taken in reviſing my Eſſay, and for his permiſſion to publiſh his remarks, that I conſider it as my indiſpenſable duty to pay every poſſible attention and regard to them. And as I cannot ſay with truth, that I think them juſt or valid, I have no other way to ſhew my ſenſe of them, but by giving thoſe anſwers to them which I think they fairly and eaſily admit of.

Secondly, I know that though they appear to me of no weight, yet they have appeared juſt and important, not only to the author of them, but to two other perſons, of whoſe talents, and of whoſe knowledge in various branches of ſcience, eſpecially in Mathematics and in Phyſics, I have the higheſt opinion: it is poſſible that the remarks may appear equally valid to other people, and that anſwers to them may therefore be neceſſary.

Thirdly, As they are almoſt all of a particular kind, conſiſting chiefly of vague, obſcure, metaphorical, and ambiguous expreſſions;

preſſions; as there are in ſome of them very needleſs and unwarrantable innovations or perverſions of common language, which tend obviouſly to perplex our reaſonings, but can in no degree alter or affect the nature of the things and relations about which we reaſon; and as there ſeems to be in all of them a peculiar ſtudy to avoid thoſe ſtrict reaſonings by neceſſary conſequences, which alone I have employed, and that complete deciſion of all queſtions of fact, which I have recommended, by open unequivocal experiment, without any appeal to conſciouſneſs, or to preconceived opinions and common prejudices; I think they afford me a good opportunity of ſhewing what kind of anſwers may be given, and ought to be given, to ſuch objections.

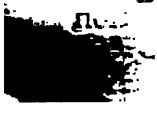
It will be obſerved by every attentive reader, that the paragraphs only, not the remarks or objections contained in them, have been numbered by the author of the remarks; that ſeveral different remarks may be found in one number or paragraph; and that the ſame kind of objection

tion pervades ſeveral different paragraphs. To this inaccuracy of arrangement in ſtating the remarks and objections to my argument, the arrangement of my obſervations on them, and of my anſwers to them, muſt in ſome meaſure correſpond.

N° I.

AFTER what I have ſtated ſo ſtrongly, and illuſtrated ſo fully, in my Eſſay, concerning the ambiguity of the term *Cauſe*, as having, both in common language, and in the writing of philoſophers, various meanings, ſome of them more general and comprehenſive, others of them more particular and limited, I could not have expected that any perſon would have given, with a view to ſtrict reaſoning, ſuch a vague account of the doctrine of the Neceſſitarians as is given in the paragraph N° 1.

That paragraph contains nothing *peculiar* to the doctrine of Neceſſity, nor any thing but what mankind in general, and



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the aſſertors of the liberty of human actions in particular, myſelf included, will moſt readily admit.

As a mere account of the doctrine of Neceſſity, it is wonderfully *imperfect*: for, according to that doctrine, not only there are *Cauſes* for all human actions, which *Cauſes* are to be found in the nature of the mind, and in the ſentiments, &c. which ariſe in it; but, moreover, the relation between the voluntary actions of men and the *Cauſes* of them, is either preciſely, or very nearly, the ſame with that between the changes which occur in lifeleſs bodies and the cauſes of theſe changes; and, in particular, the relation between thoſe ſentiments, &c. commonly called *Motives*, and the voluntary actions of men, is ſuch as to exclude the poſſibility of any ſelf-governing power in men with reſpect to their own *actions*, juſt as much as any ſelf-governing power in lifeleſs bodies, with reſpect to the *changes* of which they are ſuſceptible, is made impoſſible by their nature, and by the irreſiſtible influence of the *cauſes* of the *changes*

ges which occur in them. Mr HUME and Dr PRIESTLY, and I believe all the moſt recent aſſertors of the doctrine of Neceſſity, have even ſpecified the peculiar circumſtance or relation of *conſtant conjunction* as ſubſiſting equally between motive and action, and between phyſical cauſe and effect, and equally and abſolutely excluding the poſſibility of liberty or ſelf-governing power in living men and in lifeleſs bodies.——Such was the doctrine of Neceſſity, either on the ſuppoſition of the conſtant conjunction, or on that of the occaſional and ſeparable conjunction of motive and action, (one or other of which ſuppoſitions *muſt* be true), and by no means the vague doctrine expreſſed in N° 1. (which may be either true or falſe, according to the meaning given to the term *Cauſe*), that I undertook to examine, and to refute by an argument *ad abſurdum*.

N° 1. conſidered as an introduction to a ſeries of remarks on my Eſſay, and of objections to it, and of arguments in favour of the doctrine of Neceſſity, is wonderfully

derfully *uncandid*: for it implies, that the aſſertors of the liberty of human actions, and that I in particular, have either denied that our actions depend, as other events do, on cauſes; or at leaſt that we have aſſerted, that the cauſes on which they depend are *not to be found* in the nature of the mind, and in thoſe ſentiments, &c. which ariſe in it. Now, the truth is, that we all admit and maintain, that the voluntary actions of men, as much as the ebbing and flowing of the ſea, depend on *cauſes*, that is, on *principles of change*; and that theſe cauſes are to be found in the nature of the mind or living perſon, and in the ſentiments, &c. that ariſe in the mind; which ſentiments, as bearing relation to voluntary actions, are called *Motives*. The very plan and object of my Eſſay has been to ſhew, by accurate obſervation and ſtrict reaſoning, that our voluntary actions do not depend *entirely* on ſuch ſentiments or motives, as the tides do on their phyſical cauſes; but that they depend, partly on ſuch ſentiments, partly on *ſomething elſe* in the nature of the mind itſelf, the nature of which *ſomething elſe* in the mind I have

ſpecified; and have ſhewn, that nothing analogous to it appears to belong to lifeleſs bodies, or to have any ſhare in producing thoſe changes which occur in them, conſtantly and irreſiſtibly, on the application of the phyſical cauſes of ſuch changes.

Before I diſmiſs N° 1. I muſt obſerve, that there is a great impropriety in the expreſſion, "human actions, or the acts of the will which prompt them." Theſe metaphorical and ambiguous expreſſions ought carefully to be avoided in all reaſonings concerning the human mind: they perplex and darken the plaineſt and cleareſt thoughts; they encreaſe the difficulty of a work difficult at any rate; and have on many occaſions fruſtrated the reſearches of the moſt acute and enlightened philoſophers.

In the preſent inſtance, *human actions* are repreſented as different from the *acts of the will*: the latter are repreſented as *acting* on the former, *prompting* them; this implies the ſeparate exiſtence of thoſe *actions* and *acts*, and a kind of agency of the acts

acts upon the actions. This, again, implies a kind of *life* in thoſe *acts*. The *will*, too, ſeems to be conſidered as *a Being* ſeparate from the man, and capable of having *acts* of its own; that is, as capable of acting.

I am ſure none of theſe extravagancies were intended by the author of the remark: but his words, taken literally, convey them all; and there is no occaſion to uſe ſuch words. Let it always be remembered, that in theſe diſcuſſions we have only one being, one agent, to conſider; that is, the mind, or living perſon. Such terms as Will, Judgement, Memory, Imagination, Senſation, are very ambiguous, and of very dangerous uſe. They never expreſs ſeparate Beings capable of *acting*, or having *acts* of their own. They expreſs our notions of certain faculties of the mind, or its powers of acting in certain ways; and conſequently, by an eaſy tranſition, and almoſt inevitable and imperceptible metaphor, they denote the ſeveral claſſes of acts of the mind that are referred to thoſe heads or faculties reſpectively.

ſpectively. Often, by a further metaphor, they are employed to denote ſingle inſtances of acts, or exertions of faculties: As for example, will for willing, or volition; judgement for an act of judging, &c.

An act of the will can mean nothing but an act of *willing*, or the voluntary act of a perſon. Such an act may be very complicated: all overt acts certainly are ſo, depending on the conformation and condition of our bodily organs: it is highly probable, that all acts of the mind are (for the ſame reaſon) more or leſs complicated. The *willing* is a circumſtance and part of many complicated acts, both overt and ſecret, and may no doubt take place without the reſt of ſuch acts; as in the inſtance of a palſied perſon, *willing* to move his hand, *willing* to ſpeak, *willing* to remember, but unable to do any of them. To ſpeak of an *act of the will prompting an action*, is either a violent metaphor, like ſaying that the wiſdom of *Solomon* ſuggeſted to him his famous judgement between the two mothers, or that the eloquence of *Cicero* dictated to him his orations,

orations, or that the philoſophical genius and mathematical knowledge of *Newton* ſhewed him the compoſition of light and the general gravitation of matter; or elſe it is an hypotheſis too extravagant and abſurd to deſerve a moment's conſideration. ——The application of what is here ſaid will appear in the obſervations to be made on ſome of the other remarks.

N° 2.

THIS paragraph is wonderfully *obſcure*. It is, I preſume, needleſs to inquire minutely, how many, or what ſtrange things, may be meant by the odd phraſe, *the phyſical conſtitution of the mind on which its exiſtence, &c. depend*, as the author himſelf acknowledges, *we have no faculties for examining it*.

The phraſe *proper phyſical cauſe*, as uſed by him to denote ſomething *ſuppoſed to be contained in the phyſical conſtitution of the mind*, requires more particular conſideration.

tion. The term *Cauſe*, in its moſt extenſive ſignification, means any principle of change; of which there are many different *kinds*. *Phyſical* is a Greek word, of the ſame meaning with *natural*. *Phyſical cauſe*, therefore, may be ſuppoſed to mean any *natural principle of change*. Now, we are not inquiring after any principles of change, but ſuch as are perfectly natural: For example, an *agent*, ſuch as a living perſon, according to the common notions of mankind, is as truly and naturally a principle of change with reſpect to his own voluntary actions, as impulſe is with reſpect to motion, or heat with reſpect to fuſion; or as *motives* are with reſpect to actions, or evidence with reſpect to belief. But theſe are four different *kinds* of cauſes, and of relations of event. In this ſenſe of the term *Phyſical cauſe*, to ſay, that *the phyſical conſtitution of the mind contains it*, is as great an impropriety, as it would be to ſay, that the phyſical conſtitution of a man contained the father of his children, and that the phyſical conſtitution of a woman contained the mother of hers. The mind,

mind, or living perſon, does not *contain*, but *is*, that kind of cauſe; juſt as a man and his wife do not *contain*, but *are*, the father and mother of their children. I always avoid uſing the term *Cauſe* in that ſenſe; becauſe, though ſanctioned by ſome philoſophers, it is repugnant to common uſe; juſt as it would be to ſay, that parents were the cauſes of their children. In common language, we ſay, that men ſpeak, and walk, and eat, and drink, and are fully as well underſtood as if we were to ſay, that they *were*, or that they, or that their phyſical conſtitutions, *contained* the proper phyſical cauſes of ſpeaking and walking, of eating and drinking.

If by *proper phyſical cauſe* he means that kind of cauſe which impulſe is to motion, heat to fuſion, &c. which excludes the poſſibility of any ſelf-governing power in the ſubject, whether living perſon or lifeleſs body, he ought, in the firſt place, to have explained very fully, why he aſſumed as a ſelf-evident principle a doctrine

trine ſo ſtrange, and ſo repugnant to common opinion, as that it is contained in the phyſical conſtitution of the mind, or in the nature of every ſubſtance in which a change takes place.

We regard the ſtroke of a billiard-club on a ball, as the phyſical cauſe of the ball's conſequent change from reſt to motion; and we regard the exploſion of gunpowder in a loaded cannon, (which exploſion is only a peculiar modification of impulſe), as the phyſical cauſe of the change of ſtate in the ball from reſt to motion. But we do not regard the ſtroke of a wooden club, or the exploſion of gunpowder, as contained in the phyſical conſtitution of the billiard, or of the cannon ball, reſpectively.

In like manner, we conſider the ſun and moon as the phyſical cauſes of the tides; but by no means as contained in the phyſical conſtitution of the ſea: on the contrary, we believe the moon to be two hundred and forty thouſand miles, and the ſun

ſun to be at leaſt an hundred millions of miles, diſtant from the ſea. We regard a certain degree of heat as the phyſical cauſe of the melting of ice, and a certain greater heat as the phyſical cauſe of the boiling of water; but by no means as contained in the phyſical conſtitution of ice or of water. We regard heat and light, and air and moiſture, not as the full phyſical cauſes, but as partial and acceſſory cauſes, of the growth of plants; yet not as contained in the phyſical conſtitution of them. We regard, however, the vital principle of a plant, the concurrence of which with the other cauſes already mentioned is neceſſary for its growth, as contained in, or making a part of, the phyſical conſtitution of it. So, in the human body, we regard contagion as the cauſe of the production, mercury as that of the cure, of a very common diſeaſe; but we do not regard either the contagion or the remedy as contained in the phyſical conſtitution of our bodies; any more than a doſe of arſenic, or a ſtab with a dagger, which may be the cauſes (immediate or remote) of diſeaſes and of death. But we conſider

the vital principle, without which there could neither be the venereal diſeaſe from contagion, nor the cure of it from mercury, as a part of the conſtitution of the body.

Even many of our moſt common mental operations or changes manifeſtly depend in a great meaſure on cauſes (principles of change) that cannot without abſurdity be ſaid to be contained in the phyſical conſtitution of the mind. Thus, belief depends on evidence, ſo perfectly as to exclude the poſſibility of any ſelf-governing power with reſpect to it. Yet though the belief of twelve ſenſible jurymen, or of a great popular aſſembly, will depend completely on the teſtimony of two or three good witneſſes, it would be abſurd to ſay, that their teſtimony was contained in the phyſical conſtitution of the minds of thoſe who heard and who believed it. And in ſenſation, though much no doubt depends on the phyſical conſtitution of the bodily organs, and much on the ſtate of the mind, it is plain, that much depends on external cauſes, ſuch as the impulſe of light on the retina, the vibrations

brations of the air conveyed to the organ of hearing, the volatile odorous particles applied to the noſtrils, &c. which certainly are not contained in the phyſical conſtitution, either of the human body or of the human mind.——Suppoſing, laſtly, as the moſt intelligible and favourable conſtruction that can be given to the phraſe in queſtion, that the author of the remark meant no more by it than to ſay, that he could not *conceive* any change to take place in mind or body without a phyſical cauſe for ſuch change; we muſt firſt inquire what he means by the term *conceive*, and it will immediately appear what regard is due, and what anſwer ſhould be given, to the remark. If he has uſed that word in its moſt ſtrict and proper ſignification, as ſynonymous with *underſtanding*, *apprehending*, or *having a notion of*; which I ſhould preſume were his meaning by it, if he ſhould ſay, that he could not *conceive* the joys of heaven, or that a man who never ſaw could not *conceive* the difference between red and blue; and if he has attended to his own thoughts with ſufficient candour and patience;

there muſt be a very great peculiarity and a fundamental defect in his faculties: for ordinary men *conceive* eaſily what he cannot conceive at all; and they *believe* that there are many different relations of event, and ſeveral other kinds of cauſes, beſides phyſical cauſes ſtrictly ſo called, and many events that do not depend on phyſical but on other cauſes. Such a defect in his faculties muſt completely diſqualify him from judging of this ſubject, or underſtanding what other men underſtand about it. And it would have been prudent for him not to have meddled with it. If he has uſed the term *conceive* as ſynonymous with *believe*, as is very commonly done, then the very myſterious ſentence, the firſt of N° 2. is little leſs than a begging of the queſtion. It is at leaſt a plain declaration, that his opinion with reſpect to it is fixed beyond the reach of argument, or evidence of any kind. If he really *cannot* believe or conceive what is to be proved, he muſt let it alone, and leave it to the conſideration of ordinary men, who can conceive all common notions; that is, who underſtand,

or

or at leaſt who can learn, common language; and who not only *can*, but *muſt* believe according to evidence. My Eſſay is addreſſed to ſuch perſons only as can *conceive* or apprehend all thoſe things or notions about which I reaſon; and who will *believe That* to be true, the direct contrary of which is proved to be falſe, as implying, by neceſſary conſequences, ſome things which are evidently abſurd, and others which are experimentally falſe.

As to the third ſentence of N° 2. I muſt obſerve, that *volition* and *act of the will* (which in it ſeem to be diſtinguiſhed) are perfectly ſynonymous terms; and that *the perceptible operations of the mind, or the proceſſes of thought which attend on* (I preſume the author means rather which precede) *volition*, (or act of the will), *may be conſidered as exciting cauſes* of ſuch act of the will or volition, or not, juſt according to the ſenſe in which he employs the phraſe *exciting cauſe*, that is, according to the notion or relation which he means to expreſs by it.

Some

Some thoughts which precede or attend our voluntary actions, ſuch as appetites, paſſions, deſires, and ſome judgements, or, in general, what are called *Motives*, are univerſally acknowledged as a kind of principles of action, that is, of change; and as they are only partial and acceſſory, not the ſole cauſes of the actions referred to them, they *may* be called *exciting cauſes* of thoſe actions, by an extenſion of the meaning of the phraſe *exciting cauſe*. But ſuch an innovation in language is, in the firſt place, needleſs, becauſe the familiar terms *motive* and *final cauſe* expreſs the ſame meaning, or the notion of the ſame relation, perfectly well. It is, in the ſecond place, improper, becauſe the phraſe *exciting cauſe* has a very different meaning, both as employed in medical language, and as I have uſed it in this Eſſay. To employ the ſame phraſe to denote different meanings, is the ſureſt way to fruſtrate our reaſonings, by making us confound in our thoughts the different things about which we reaſon.

Other thoughts, ſuch as ſenſation, perception,

ception, apprehenſion, memory, ſome judgements, nay ſome paſſions, (for example grief), which precede or attend many of our voluntary actions, have never been conſidered as cauſes of ſuch actions, any more than the morning dawn is conſidered as the cauſe of the riſing of the ſun; nor ought they to be regarded as any kind of cauſes of our actions.

And ſome proceſſes of thought, even violent appetites, paſſions, and deſires, are often ſo far from being cauſes of many voluntary actions which they precede or attend, that ſuch actions are commonly and juſtly thought to be done in ſpite of them; that is, in oppoſition to them. Thus, when a rake takes phyſic, which he loaths, for his ills, and marries a rich old woman, whom he abhors, to repair his ſhattered fortunes, we conceive, that his loathing of the phyſic, and his abhorrence of the wife, though they precede and attend the volitions and actions of ſwallowing the drugs, and marrying the wife, are not the motives of them. The motives for theſe two actions reſpectively are

are conceived to be the deſire of recovering health, and the deſire of acquiring wealth. But the loathing and the abhorring are by no means ſentiments indifferent or unrelated to the actions in queſtion, as numberleſs other proceſſes of thought preceding or attending them might be; ſuch as the perſon's ſentiments in religion or in politics; for example, his being High or Low Church, Whig or Tory. They are motives for *not* acting in the way ſuppoſed; but they are motives *ſeparated* from their proper actions.

The author of the remark under conſideration may, at his own diſcretion, apply the phraſe *exciting cauſe*, with reſpect to the volitions of ſwallowing and of marrying, in the caſes put, either to all the proceſſes of thought that are ſpecified, Whig and Tory, loathing and abhorring, deſire of health and deſire of wealth, as they all attend or precede the actions, or only to theſe two laſt. It would be fooliſh to diſpute with him about a word; but it muſt be remembered, that all thoſe three kinds of ſentiments ſtand in relations to the

the actions alluded to, very different from one another, and very different from the relation of occaſional cauſes to diſeaſes, or from that of the partial and acceſſory cauſes of vegetation to the growth of plants. And all theſe differences of relation muſt be aſcertained, not by arbitrary definitions, nor by the arbitrary impoſition of names, but by careful obſervation and experiment, and ſtrict induction from theſe; and for the ſake of preciſion and diſtinctneſs in reaſoning, they *ought* to be expreſſed by different words or phraſes.

As to the two laſt ſentences of N° 2. I muſt obſerve, that there ſeems to be in them a ſtudied peculiarity, and intended obſcurity, in the way of ſtating and contraſting the two ſuppoſitions. Many circumſtances contribute to this obſcurity. Neither the term *Motive*, nor any equivalent word or phraſe, is employed in ſtating the queſtion. This omiſſion cannot have been by chance; and it is a very ſtrange omiſſion, to ſay no worſe of it, in ſtating objections to an argument about the relation of motive and action; which

argument conſiſts of neceſſary conſequences from two different ſuppoſitions with reſpect to that relation. It ſhews a ſtrong deſire to *evade* that argument, and to avoid examining, and either refuting or admitting, thoſe neceſſary conſequences. The expreſſions, *proceſſes*, or *trains of thought*, are by far too general and vague; nor can I know with certainty what is meant by them; and I think it probable that they are intended to denote many things, or kinds of thoughts, which may precede or attend voluntary actions, without being the motives of them. Now, with ſuch thoughts I have nothing to do in this argument.

The word *contingent* occurs repeatedly in thoſe two ſentences; and much ſtreſs ſeems to be laid on the notion expreſſed by it. It ought therefore to have been accurately explained; for it may be underſtood in different meanings. If by *contingent* be meant *coming to paſs without a cauſe of any kind*, ſuch a notion is here quite out of the queſtion: neither I nor any perſon that I know of can believe *that* ever to be the

: caſe. But if by *contingent* be meant *ting to paſs without a phyſical cauſe*, (in : ſenſe fully and repeatedly explained l illuſtrated already), we hold, that re are numberleſs contingent events, the familiar occurrences in animal and getable life, and in all proceſſes of ought, or operations of mind. In par- ular, we hold, that all our voluntary ions, whether ſecret, like chuſing and olving, or overt, like walking and eat- , are, in this ſenſe of the term, con- gent. We know of nothing that ſtands the relation of phyſical cauſe to them. : know of no other cauſes or princi- s of change for them, but the perſons agents, and the motives: it is, I think, -evident, that neither the agents nor : motives are the phyſical cauſes of the ions referred to them; nor has it ever n ſaid that the agents were ſo; but it ; been maintained that the motives re ſo, on the principle of their being ıſtantly conjoined with their reſpective ions; which phyſical cauſes ſeem to be h their reſpective effects. Now, this ı be aſcertained only by examining the

relation of motive, and comparing it with that of phyſical cauſe. But the author of the remark thinks fit to drop the conſideration of motive, and its relation to action, and to treat of things which may be very different, and which muſt be ſuppoſed ſomehow different, as he gives them other names.

—" *However conſtantly conjoined the acts of the will be with their proper phyſical cauſe.*"—I cannot gueſs, nor have I as yet been lucky enough to meet with any perſon who can gueſs, what is here meant by *proper phyſical cauſe.* The very queſtion at iſſue is, " Is the motive of an action its phyſical cauſe;" which involves the more general queſtion, " Are there phyſical cauſes of voluntary actions?" Both theſe queſtions muſt be anſwered in the negative, after ſtrictly examining and comparing voluntary actions with phyſical effects, and the relation of motive with that of phyſical cauſe, eſpecially with reſpect to the point of conſtant conjunction.

The

The word *however* comes forward here in a very queſtionable ſhape. Does the author of the remark mean to ſtate the principle of conſtant conjunction, as an eſſential part of the firſt or of the ſecond ſuppoſition, or to omit it in both, or to avoid doing either the one or the other, and ſo to evade the deciſion of the queſtion, by eſcaping from both the *horns* of the dilemma?

This laſt is abſolutely inadmiſſible. In ſtrict and candid reaſoning, a perſon muſt take his choice of one or other of the two ſuppoſitions offered in ſuch a dilemma; juſt as in geometry he muſt admit, that the line A is either equal to the line B, or not equal to it; and if it be not equal to it, that it muſt be either greater or leſs than it. From what follows, however, there can be no doubt, that this unphiloſophical and impracticable eſcape from the dilemma was intended.—"*If that phyſical cauſe is only attended with its effect when ſtimulated by ſomething contingent.*" *Phyſical cauſe* ſhall be allowed to ſignify any *thing* that the author pleaſes; and the ſtrong metaphor, *ſtimulated by*, (which, taken literally, implies a kind of life and agency, both in the

the cauſe ſtimulated, and in the ſomething ſtimulating it), ſhall be underſtood to mean only the occaſional co-exiſtence and co-operation (whatever be the mode of it) of ſomething elſe. Then it is plain, that according to the ſtate of the caſe given by the author of the remark, in the firſt ſuppoſition, what he calls the phyſical cauſe of the act of the will, is repreſented both as *conſtantly conjoined*, and at the ſame time as *not conſtantly conjoined* with its proper act; conjoined with it only when ſtimulated, not conjoined with it when not ſtimulated, by ſomething contingent. Nothing but the obſcurity of the expreſſions which he hath employed, and his ſtudiouſly avoiding thoſe plain and preciſe terms which I have uſed, could have prevented him from ſeeing that he has here fallen into ſomething rather worſe than a contradiction in terms; an incongruity of thought, of the ſame kind with that which in common language is called a *Bull*. What ſhould we think of a mathematician who ſhould ſay, that the ſquare of the longeſt ſide of a triangle is *conſtantly* equal to the ſum of the ſquares of the other two ſides of it; but that, *however* conſtant this relation

relation might be, it took place only in the contingent caſe of the triangle being right angled?

Or what ſhould we ſay of a chemiſt who ſhould maintain, that water was the *menſtruum*, or proper phyſical cauſe of the ſolution of ſilver and of mercury; and that it was conſtantly conjoined with that effect on thoſe bodies when put into it; but that this phyſical cauſe, *however* conſtantly conjoined with its effect, was attended with its effect only when ſtimulated by a certain quantity of nitrous acid, and a certain degree of heat?

Or what ſhould we think of a phyſician who ſhould aſſert, that a few grains of cryſtals of tartar are the proper phyſical cauſe of ſevere vomiting, and are conſtantly followed by it; but that, *however* conſtant this may be, it happens only when the cryſtals of tartar are ſtimulated by a certain quantity of antimony?

Whatever be thought of the chemiſt, the phyſician, and the mathematician, in theſe

theſe ſuppoſed caſes, muſt be thought of the metaphyſician who conceives, that the acts of the will are conſtantly conjoined with their proper phyſical cauſe; but that, *however* conſtantly they are conjoined with it, this phyſical cauſe is only attended with its effect when ſtimulated by ſomething contingent.

I have conſidered this point the more minutely, becauſe the incongruity of thought which every attentive reader muſt find ſo glaring, ſeems to be imputed to *me*. The expreſſion conveying it appears in the ſtating of *my* ſide of the queſtion; but I diſclaim it. It will appear clearly, both from the explanation, and from the uniform uſe and application of the terms *conjunction*, *ſeparation*, *conſtant*, *occaſional*, &c. as applied to motives and actions, cauſes and effects, and from the many inſtances given of their conjunction and of their ſeparation, in my Eſſay, that I *could not* have fallen into ſuch an incongruity of thought as that under conſideration.

As my own way of ſtating my own ſide of

of the argument, or thoſe propoſitions which I mean to prove, is at leaſt clear and preciſe, and peculiarly adapted to the mode of reaſoning which I employ, it was needleſs to give, in the remarks, my ſentiments in any other words but my own. But if other words, without neceſſity, were to be employed inſtead of my own, they ought to have been ſuch as to do juſtice to my argument, by expreſſing my meaning with equal clearneſs and preciſion, and without addition, diminution, or alteration.——As the caſe ſtands, I may ſay of my friend's way of repreſenting my meaning, nearly what MARTIAL ſays of a perſon's way of reading or repeating *his* verſes:

Quem recitas, meus eſt, O Fidentine, libellus:
Sed male cum recitas, incipit eſſe tuus.

N° 3.

As there ſeems to be almoſt always (perhaps even in ſleep) ſome ſucceſſion or train of thoughts going on, over which a perſon has but a partial and limited voluntary power; and as a metaphyſician may chuſe to call any volition that occurs in ſuch a train the *reſult* of the thoughts which preceded it, whether any of them ſtood in the relation of motive to it or not; and as ſuch trains of thought cannot be made the ſubject of open obſervation and experiment, but may eaſily be made the ſubject of endleſs cavil and verbal altercation, I muſt diſregard alike, as no way related to my mode of reaſoning, the firſt ſentence of this, and the laſt of the preceding paragraph. But the clauſe, "*As far as it is neceſſary to trace back the ſteps of them*," deſerves ſome attention. It is not neceſſary to trace the ſteps of them at all, if the object be only to aſcertain the relation of motive and action with reſpect to their conſtant or their occaſional and ſeparable conjunction: for this will appear by obſerving,

ving, whether actions are always done, or only ſometimes, on the application of their reſpective motives; which is a matter of ſimple obſervation and experiment, and, as has already been fully explained, may be eaſily known without any regard to the number or to the nature of the ſteps of the train of thought intervening between the motive and the overt act.

If the object be to aſcertain that relation metaphyſically, (if I may be allowed the expreſſion), by mere conſciouſneſs and attention to our own thoughts, which I think a very bad plan, becauſe it is very difficult, and ſubject to endleſs cavil; then it is neceſſary to trace every ſtep of the train of thought *back* as far as the motive, and *forward* as far as the action, elſe the relation between theſe, as to the conſtancy or ſeparability of their conjunction, can never be diſcovered.

But if the object be only to evade the deciſion of the queſtion concerning the relation of motive and action by neceſſary conſequences and open experiment; then,

to be ſure, it is neceſſary to avoid tracing the ſteps of the train of thought, either *back* to the motive, or *forward* to the action: and it is expedient to ſpeak of it in the moſt ambiguous and indefinite terms; and to put it, and to leave it, as much in the dark, and as much out of the reach of experiment, as poſſible.

"*The doctrine of the Neceſſitarians is* SUPPOSED *to be.*" Why *ſuppoſed?* Have I miſrepreſented it any way, either from miſtake and ignorance, or from deſign? Have I not given it in the very words of MR HUME? Have not his doctrine and his phraſeology been adopted by DR PRIESTLY? Is not my mode of reaſoning perfectly independent of them, and of their phraſeology, and of their doctrine? Is not the propoſition which I undertake to demonſtrate ſtated clearly and preciſely *? and is it not directly contrary to the doctrine of Neceſſity? If my dilemma be complete, *my* notion of conſtant conjunction preciſe, my axioms ariſing from it

* Pag. 171.

juſt;

juſt; and if my inferences with reſpect to the reſult in the various caſes put be ſtrictly neceſſary conſequences of the principle aſſumed, (the direct contrary of what I mean to demonſtrate); and if theſe inferences be falſe or abſurd; is not my demonſtration perfect? and would it not be ſo, though neither MR HUME, nor DR PRIESTLY, nor any other philoſopher, had ever ſtated or taught any doctrine of Neceſſity, nay, though my opinion had been quite new to mankind, and the contrary opinion as natural and as univerſal among them, as the belief of the flatneſs and ſtability of the earth, and of the daily motion of the ſun and ſtars around it? If ſo, I can have no occaſion to conſider any one of the numberleſs opinions or ſyſtems that may be called doctrines of Neceſſity. For they muſt either involve, or not involve, the propoſition contradictory to mine in page 171: if they do involve it, they are refuted by my argument, unleſs ſome error in it can be pointed out: if they do not involve the propoſition contradictory to mine, *requieſcant in pace:* I do not wiſh to diſturb them, nor to quarrel

rel with them about their names, and it is plain that my argument can never reach them.

— " That every apprehenſion and deſire of attainable good, or, *in the language of the Eſſay*, every motive."—If the *apprehenſion and deſire of attainable good*, or, more conciſely, *deſire*, (for deſire implies apprehenſion, and the notion of good in the object deſired), had been given as ſynonymous with *motive*, or explanatory of it, or as a definition of it, I ſhould have acquieſced in it as a fair, though, for reaſons formerly mentioned, a very needleſs definition of motive, and one that, for reaſons abundantly obvious, might be ſubject to many cavils.

But here I find *inſinuated* a diſtinction, and perhaps an important difference, between *motive* and *deſire of attainable good.*

Why, *in the language of the Eſſay?* This is an inſinuation that the language of the Eſſay, at leaſt in ſo far as relates to the uſe of the term *Motive*, is different from common

common and from philoſophical language. If it be ſo, it is very bad indeed; nay more, the Eſſay itſelf, inſtead of being, as the author intended, a ſpecimen of patient candid diſquiſition, and good reaſoning, amounting to a rigorous demonſtration of the point in queſtion, muſt be one of the vileſt quibbles that ever was obtruded on the world, either with reſpect to this or to any other ſubject; and the author of it muſt have deſervedly forfeited all credit, both in point of underſtanding and of candour.

An objection to the Eſſay ſo important ought to have been expreſſed fully and clearly, not conveyed by a ſeemingly caſual hint or inſinuation; and a cenſure on the author of it, at once ſo ſevere and ſo groundleſs, ought not to have been expreſſed or conveyed in any way.

That I have not miſtaken the meaning of the hint in queſtion, nor done any injuſtice to the author of the remark in theſe obſervations on it, will appear from comparing this hint, and the expreſſion *ſuch motives*,

motives, in the end of N° 3. with the general tenor of the ſubſequent remarks, and particularly with the two laſt ſentences of N° 5. In the former of theſe, it is ſaid to be "a miſtake to have ſuppoſed, that, according to the Neceſſitarians, every apprehenſion and deſire of attainable good had a determinate influence on the will." Let it be remembered, that I reaſon about the conſtancy or inconſtancy of the conjunction of motive and voluntary *actions*, not about the influence of deſires on the *will*; and that it is abſolutely impoſſible that I ſhould have fallen into any miſtake with reſpect to a point on which I had neither expreſſed nor formed any opinion. Such *deſires* either are or are not *motives*: if they are, I am perfectly right as to the doctrine of the Neceſſitarians; if they are not, I at leaſt am not miſtaken with reſpect to it, as I have never ſaid nor thought, that, according to their doctrine, any things elſe but motives were conſtantly conjoined with actions. In the latter of thoſe ſentences, (N° 5.), it is ſaid, that "no Neceſſitarian requires any argument to be convinced, that there

there is no conſtant conjunction between them (deſires of attainable good) and human actions."

Here there is an explicit acknowledgement, that ſuch deſires are not conſtantly conjoined with actions; and tho' nothing is ſaid with reſpect to the conſtant conjunction of motive and action, about which I reaſon; yet it is certainly implied, that they are conſtantly conjoined; and therefore that a motive is ſomething different from a deſire of attainable good.

In the remarks, as they are printed, there is no diſtinct enunciation of what the author of them means by motives; nor, conſequently, is it clear what kind and degree of perverſion of language he means to impute to me with reſpect to the uſe which I make of that term. But in the remarks, as I firſt received them from the author of them, this was fully explained by a few ſentences, which made the latter part of N° 14.; the ſubſtance of which was, " That by the term *Motive*, in the language of the Neceſſitarians, he

underſtood only thoſe gratifications which have obtained a judgement aſcertaining their ſuperior merits, upon the whole, to others in competition with them.—That this import of the term ſeemed agreeable to Dr Johnſon's interpretation of it, "That which determines the choice,"—"That which incites to action." As he obſerved, however, that in the Eſſay it ſeemed employed to denote any apprehenſion and deſire of attainable good, whether its ſuperiority to others, in competition with it, had been aſcertained or not, he avoided making uſe of it in his remarks."

Allowing the ſtrongly metaphorical expreſſions in theſe ſentences to paſs without diſcuſſion, let us conſider only the general import of this remark, as ſhewn by the application of it to particular inſtances. It amounts plainly to this, That thoſe deſires, &c. *alone*, are motives, according to which a perſon thinks fit, judges proper, determines, reſolves, or chuſes to act; or according to which he does act, when not hindered by phyſical impediments: For example, that in the caſe put, p. 226. the porter's

porter's deſire to earn a certain number of guineas is a motive; but that his deſire of earning an equal number of half-guineas is no motive. In like manner, when a gay rake marries a diſagreeable rich old woman, his deſire to get poſſeſſion of her fortune is a motive; but his diſlike to her perſon is no motive. And when a ſturdy rogue endures the torture, rather than confeſs, and be hanged, his diſlike to hanging is a motive, his abhorrence of pain is none: but when a rogue of a feebler frame yields to the torture, or to the fear of it, and confeſſes, though he knows he muſt be hanged if he does ſo, his abhorrence or his fear of pain is a motive, his averſion to hanging is none. And when a miſer delivers his purſe to a highwayman who civilly puts a piſtol to his breaſt, he has a motive for giving away his money, but none for keeping it.

It will appear from the whole tenor of my reaſoning, as well as from ſeveral particular obſervations in my Eſſay, for example in p. 133. and 461. to 464. that

I was not unprepared for this kind of objection; that it was eaſy for me to anſwer it; and impoſſible for me to think it of any weight, or to regard it as any thing elſe but a wilful perverſion of language.

I was, however, mortified to meet with it in theſe remarks; not for my own ſake, but my friend's: for I was peculiarly pledged to publiſh *his* remarks, with my anſwers to them, if I did not think his objections valid. I could not anſwer this objection, without vindicating myſelf from the imputation of quibbling; nor do this, without retorting, and fixing that charge on him. For it is plain, that either he or I muſt be quibbling on this point, in a manner almoſt unparalleled.

In hopes of ſaving myſelf the trouble and vexation of ſuch a long diſcuſſion about words, which can avail nothing as to the deciſion of the philoſophical queſtion, I explained very fully my notion of it to a brother Neceſſitarian of the author of the remarks, referred him to the paſ-

ſages

ſages in my Eſſay in which theſe verbal objections were anticipated and diſcuſſed, and prevailed on him to repreſent to the author of them what I thought of them, as unphiloſophical in themſelves, and in one point of view injurious to me, and requiring an anſwer which implied a retorting of the charge of perverting language, or quibbling, which they conveyed by ſuch ſtrong implication; and in my name to beg the author to reconſider them maturely.

He did ſo accordingly; and after ſome time returned them to me, with the latter part of N° 14. eraſed, (but not made illegible), and the following marginal note ſubjoined to it; "I think the paſſage may "be ſpared; and therefore I prefer dele-"ting to illuſtrating it."

* As the paſſage (N° 14.) was eraſed avowedly as being *ſuperfluous*, and on that account; as it was not retracted as erroneous, nor acknowledged to be unjuſt with

* MS. *Penes me.*

reſpect

reſpect to me; as the ſame meaning is conveyed by irreſiſtible implication in other paſſages of the remarks which are allowed to be printed, and as indeed it plainly pervades the whole reaſoning in the remarks; I find myſelf ſtill under the unpleaſant neceſſity of diſcuſſing it fully; not that I think it a point of the ſmalleſt conſequence in ſcience, or even in the queſtion of liberty and neceſſity, as I hope ſoon to ſhew; but becauſe I am ſenſible I am not intitled to be attended to in any reaſoning, till I have ſhewn that I have neither made, nor attempted to make, any ſuch innovation or perverſion in common language, as is imputed to me. In juſtice to the author of the remarks, I have taken his own explanation of his own hints.

The term *Motive* is plainly relative; the notion of it implies or involves ſome other notions, ſuch as deſire, object, agent, action, and many others. In this reſpect it reſembles many other familiar notions of things ſomewhat of the ſame claſs or category with itſelf; as for example, agent,

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(in its moſt general meaning), or writer, poet, painter, dancer, in particular; inſtrument, in general, or ſpade, axe, ruler, compaſſes, teleſcope, in particular; phyſical cauſe in mechanical philoſophy and chemiſtry, ſuch as impulſe or heat; exciting phyſiological cauſe of the phenomena in animal and vegetable life, ſuch as heat, air, and water; evidence in general, or teſtimony in particular, with reſpect to belief. All theſe things imply, as correlatives, ſome other things, events, changes, effects, actions, &c.; that is, they can never be conceived, or thought of, any more than motive can, without conceiving or thinking of ſomething elſe. But this implied relation may be conſidered in two very different points of view, and, ſtrictly ſpeaking, is of two kinds, the one remote and general, the other immediate and particular; the former conſtant, and eſſential to the notions in queſtion, the latter only occaſional and accidental, and by no means eſſential to or implied in thoſe notions reſpectively. Thus we may regard an agent, inſtrument, cauſe, or motive, ſeverally, either as

as bearing a conſtant implied remote and general relation to their reſpective *kinds* of correlatives, or as bearing an occaſional more immediate relation to particular *individual inſtances* of their reſpective correlatives. And in good language, ſuch as is uſed in converſation by well educated perſons, and in writing by the moſt eſteemed authors, the relative terms in queſtion are employed equally (though not indiſcriminately) both in the general and in the particular meaning that I have mentioned; which it may be expedient now to illuſtrate by particular examples.

In good broad Engliſh, we call a ſpade *a ſpade*; meaning thereby an inſtrument adapted for digging the ground, and very often uſed for that purpoſe. But we call it equally a ſpade, whether it be actually and immediately employed in that way by any perſon, or not. It may be new, and never once uſed: it may have been uſed, and long laid aſide: the perſon who has got poſſeſſion of it may have no thoughts of ever uſing it; he may be conſidering whether he ſhall uſe it or not; he may be reſolving

reſolving to uſe it; he may have reſolved to lay it down; he may be uſing it not as a ſpade, but as a ſtaff, or as a lever, or as an oar, or as a weapon of offence or of defence. Still, however, in all theſe caſes, we call it an inſtrument, in contemplation of a certain relation it bears to ſuch actions generally as may be done with it; and we call it a ſpade, in contemplation of the ſame kind of relation that it bears to the action of digging the ground particularly, though remotely. Take away the notion of ſuch relations, and it could not be thought either a ſpade, or an inſtrument of any kind: it would be a body of a certain ſize and ſhape, and other properties; it would be an aggregate of wood and iron, &c.

In like manner, we think and ſpeak of a man as an agent, perhaps, as one of moſt extraordinary activity, even though at that particular moment he may be doing little or nothing, nay, though he be aſleep.

So we conceive MILTON to have been a

great Engliſh poet, not only in thoſe hours when he was compoſing the moſt ſublime and beautiful paſſages of *Paradiſe Loſt*, but when he was writing proſe Latin letters for *Oliver Cromwell:* and we conceive both MILTON and ADDISON to have been excellent writers in different ways, even at thoſe hours when they were writing nothing, but were engaged in the common duties or buſineſs of life.

We conceive and ſpeak of heat and air, and light and water, as the acceſſory cauſes of vegetation, on account of the general remote relation which all and each of them bear to the growth of plants, tho' we underſtand that any one or more of them may be applied to a plant, without producing any growth in it; nay, though all of them may be applied to a plant that has loſt the vital principle, without having any ſuch effect on it.

We ſpeak of human teſtimony as a kind of evidence, or ground of belief, without regard to the contingent fact of belief in any particular inſtance correſponding to it.

it. In caſe of the oppoſition or inconſiſtency of equally good teſtimonies, no belief, but doubt, would be the reſult: and in caſe of the moſt unimpeached teſtimony, in oppoſition to direct ſenſation and perception, or even to diſtinct memory, belief would take place, contrary to the teſtimony. Still, however, in regard of the general and remote relation of teſtimony to belief, it is called Evidence.

We often have occaſion to ſpeak of phyſical cauſes, ſuch as impulſe, gravitation, heat, menſtrua, &c. conſidering only their remote or general relation to their reſpective effects, ſuch as motion, fuſion, ſolution, &c. without regard to their being applied at any particular time to any particular body in whom ſuch effect can take place. But we conceive, that whenever they are applied to bodies between which and them the relation in queſtion ſubſiſts, their effects will conſtantly take place. This is preciſely what is meant by the relation of conſtant conjunction about which I have reaſoned; and which *ſeems* to ſubſiſt between phyſical cauſes and effects; but

certainly does not ſubſiſt between motives (commonly ſo called) and the voluntary actions of men.

The ſame obſervations and reaſonings, which it cannot ſurely be neceſſary to illuſtrate more fully, are ſtrictly applicable to the term *Motive:* and that, in fact, this term is commonly employed in this general ſenſe, will appear ſufficiently from the following examples.

" And truly it appears to me, that the " whole ſpecies are *hurried on* by the ſame " *deſires*, and engaged in the ſame pur- " ſuits, according to the different ſtages " and diviſions of life. Youth is *devoted* " *to* luſt, middle age to ambition, old age " to avarice. Theſe are the three general " MOTIVES or PRINCIPLES OF ACTION, " both in good and bad men; though it " muſt be acknowledged, that they change " their names, and refine their natures, " according to the temper of the perſon " whom they *direct* and *animate*. For with " the good, luſt becomes virtuous love,

" ambition

" ambition true honour, and avarice the
" care of poſterity."

ADDISON, *Tatler*, N° 120.

In this paſſage it may be obſerved, that the term *Motive* is applied in its moſt common, that is, its abſolute or general meaning; that certain *deſires* are expreſsly called *motives*, or *principles of action*, without the ſmalleſt inſinuation of a *motive* being any thing different from a *deſire*, or of a *deſire* becoming a *motive* in certain circumſtances only: For example, *not till the underſtanding decides on its preference, or on the expediency of attempting the purſuit of it;* and that, in the metaphorical language employed, the deſires are repreſented as hurrying men on, directing them, animating them; and men are repreſented as devoted to them. All ſuch expreſſions, whether literal and abſtract, or metaphorical and pictureſque, mean juſt the ſame thing, viz. that ſuch deſires are the principles of action, or motives, about which, and about whoſe relation to actions, we have occaſion to reaſon.

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The definition of *motive* given by Dr JOHNSON, in his Dictionary, though ſufficiently good for all ordinary purpoſes, is uſeleſs, nay bad, in ſcience, as being both ſtrongly metaphorical and hypothetical. But the inſtances of the uſe of the term, which he has ſelected from good authors, are unexceptionable; and I ſhould deſire no better inſtances in proof of what I have ſtated as the proper meaning of *Motive*. They are as follows.

1. "Hereof we have no commandment, either in nature or ſcripture, which doth exact them at our hands; yet thoſe *motives* there are in both, which draw moſt effectually our minds unto them."

HOOKER.

Here we have plainly the abſolute ſenſe of the term *Motives*, implying only their more remote and general relation to actions: not a word ſaid of the things alluded to being motives only when and after "the underſtanding decides on their preference," &c. On the contrary, as the motives alluded to are ſaid to be both in nature

nature and in ſcripture, it is irreſiſtibly implied that they are motives before the underſtanding decides on their preference, nay, whether it ever does ſo or not; juſt as the things alluded to in the firſt clauſe of the ſentence are *commandments*, whether a perſon or a perſon's underſtanding decides on their preference, or on the expediency of obeying them, or not.

It would be a palpable abſurdity to ſay, that there are both in nature and in ſcripture ſome things, on the preference of which, and on the expediency of attempting the purſuit of them, the underſtanding of every perſon who has attended or is to attend to nature, or who has read or is to read the ſcripture, has decided.

2. " Why in that rawneſs left you wife and children, thoſe precious *motives*, thoſe ſtrong knots of love, without leave taking."

SHAKESPEARE.

Part of what *Malcolm* ſays to *Macduff*; and a kind of reproach to him for not providing for

for the ſafety of his family. The uncouth word *rawneſs* means unprepared or unprovided ſtate. The expreſſion is in another reſpect elliptical: in ſtrict and full philoſophical language, the wife and children could not be called *motives:* they are properly the objects of certain affections, which affections are the *motives.* Suppoſing his wife and children to have been hateful or indifferent to *Macduff*, they could not have been called by *Malcolm* "precious motives," in the ſenſe here conveyed. But as *Macduff* is repreſented as a good man, and paſſionately fond of his wife and children, the ellipſis is eaſily ſupplied, and the meaning of the paſſage is in a moment fully underſtood. But it is plain, that the term *Motives* is applied to things or conſiderations which could not altogether have eſcaped the attention of the agent, but on the preference of which neither he nor his underſtanding had decided. They were motives according to which he did *not* act; that is, motives ſeparated from their proper actions.

3. "What can be a ſtronger *motive* to

"a

a firm truſt on our Maker, than the giving us his Son to ſuffer for us?"

ADDISON.

This is plainly the abſolute ſenſe of motive, from its remote and general relation to the action in queſtion, and predicated of a thing, whether the underſtanding decides on its preference or not. The ſame may be ſaid with reſpect to the following inſtance, the laſt given by DR JOHNSON;

4. "The *motive* for continuing in the ſame ſtate, is only the preſent ſatisfaction in it; the *motive* to change is always ſome uneaſineſs."——LOCKE.

If any philoſophers, in their reaſonings about motives and actions, had choſen to uſe the term *Motive* in a peculiar meaning of their own, different from, and much more limited than, the common meaning of it, (which would have been very needleſs, and not very wiſe, as it could be no addition to our knowledge), they ought to have begun by explaining preciſely, and illuſtrating fully, the ſenſe in which they

uſed the term; elſe their conduct might juſtly have been reckoned uncandid, as well as their reaſoning bad or frivolous. And if MR HUME and his followers had fairly announced, that in all their reaſonings about the conſtant conjunction of motives and actions, they meant by motives thoſe deſires only on the preference of which the underſtanding had decided, it would inſtantly have been diſcovered, that their doctrines bore no relation to the ſcientific queſtion at iſſue; and that thoſe great philoſophers had a mind only to make themſelves merry (according to the cuſtom of metaphyſicians) at the expence of the ignorant vulgar, who could not fail to ſtare at ſuch marvellous novelties; juſt as they would ſtare if a philoſopher ſhould tell them, that a certain quadruped, on which he occaſionally rode, was not a horſe, but only a beaſt, while he was feeding in a meadow, or ſtanding in a ſtable, nay, even though fairly bridled and ſaddled; but that as ſoon as the philoſopher beſtrode the beaſt, and clapped ſpurs to him, then he became *bona fide* a horſe, as appeared by his movement; or if the philoſopher

loſopher ſhould gravely aſſure them, that a portion of the fleſh of an ox, even tho' properly boiled or roaſted, and ſerved up to table, was not beef, but only meat; but that as ſoon as any perſon applied his knife and fork to it, and began to eat of it, then, and not before, it became truly beef.

But I am very far from thinking, that either MR HUME or DR PRIESTLY had in view any ſuch frivolous perverſion of language. It appears to me very plainly, from the whole tenor of their reaſonings on this ſubject, that by *motives* they meant juſt what I and other people who ſpeak Engliſh mean by the ſame term; that they conceived the judgement of a perſon (or, in the language of the author of the remark, the deciſion of the underſtanding) with reſpect to action, as much as his will, choice, or determination, to be the effect of the *motive* or *deſire* to which they are referred; and that being miſled by the analogy of phyſical cauſes, and conſequently attentive to thoſe inſtances only that favoured their ſyſtem, and regardleſs

of thoſe that were inconſiſtent with it, they had raſhly and erroneouſly aſſerted, that ſuch deſires or motives were conſtantly followed by or conjoined with their reſpective actions, like phyſical cauſes with their effects. And that this was only a raſh and erroneous aſſertion of thoſe philoſophers, not their real thought or belief, I judge from having found it ſo in thoſe who had adopted their ſyſtem, all of whom, the author of the remark included, as ſoon as the proper caſes were ſuggeſted to them, have perceived intuitively, without having occaſion to try any experiments, that ſuch motives were not always followed by, or conſtantly connected with, their reſpective actions. This he acknowledges fully in the laſt ſentence of N° 5.; but with a reference to the preceding inſinuation, that ſuch *things* were not what philoſophers meant by *motives*.

As MR HUME, and thoſe who have followed him in his mode of reaſoning concerning the conſtant conjunction of motive and action, have attended almoſt ſole-

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ly to thoſe caſes in which actions were done correſponding to the motives applied, it cannot be expected, that any of the inſtances which they give in proof or illuſtration of their ſyſtem ſhould be examples, like the one quoted by DR JOHNSON from SHAKESPEARE, of the application of the term *Motive* to deſires not followed by their correſponding actions. If any ſuch inſtances had occurred to MR HUME, the doctrine of Conſtant conjunction would probably never have been heard of: and if any ſuch had occurred to DR PRIESTLY, it can ſcarce be doubted, that inſtead of adopting MR HUME's ſyſtem, he would have fallen into the ſame train of thought, and of demonſtrative reaſoning, that I have employed to refute that ſyſtem. But there are many inſtances in the writings of both thoſe authors on this ſubject, in which the term *Motive* is employed, or the notion of it alluded to, in that abſolute and moſt general acceptation which I have explained, implying only its remote and general relation to action: For example,

" The

" The ſame motives always produce the " ſame actions; the ſame events follow " from the ſame cauſes. Ambition, ava- " rice, ſelf-love, vanity, friendſhip, ge- " neroſity, public ſpirit; theſe paſſions, " mixed in various degrees, and diſtribu- " ted through ſociety, have been from the " beginning of the world, and ſtill are, " the ſource of all the actions and enter- " priſes which have ever been obſerved a- " mong mankind."

" The pooreſt artificer — expects, that " when he carries his goods to market, " and offers them at a reaſonable price, " he ſhall find purchaſers; and ſhall be " able, by the money he acquires, to en- " gage others to ſupply him with thoſe " commodities which are requiſite for his " ſubſiſtence."

" A priſoner, who has neither money " nor intereſt," &c. as already quoted, pag. 65.

" We conſider not, that the fantaſti- " cal

" cal deſire of ſhewing liberty, is here " the motive of our actions."

HUME, *paſſim.*

Not a word is here ſaid of ſuch *deſires*, paſſions, &c. being no *motives* of themſelves, and only becoming motives or ſources of actions, when the underſtanding decides on their preference, &c.: on the contrary, we find them expreſsly called *Motives*, without any peculiar explanation of the term; nay, the common ellipſis is uſed; the object of deſire, ſuch as goods and money, being ſtated as the motive.

The following examples I ſelect from DR PRIESTLY.

" —— That men do in fact act accor- " ding to their *affections* and *deſires*, i. e. " in one word, according to *motives*."

" It makes no difference to ſay, that " the motive does not *immediately* produce " the action. It is enough if it neceſſa- " rily produce the immediate cauſe of the " action,

" action, or the cauſe of the immediate " cauſe, &c.: For example, if the * *mo-* " *tive* excite the deſire, the deſire deter- " mine the *will*, and the will produce the " *action*. For, contrive as many mediums " of this kind as you pleaſe, it will ſtill " follow, that the action is *ultimately* ac- " cording to the motive, *flows from it*, or " *depends upon it*; and therefore, in pro- " per philoſophical language, the motive " ought to be called the *proper cauſe* of " the action. It is as much ſo as any " thing in nature is the cauſe of any thing " elſe." Vol. 1. p. 54. 55.

" Moreover, we ſee evidently, not only " that men are determined to act by cer- " tain motives, but that the *vigour* of " their actions correſponds alſo to what " may be called the *intenſity* of their mo-

* The ſtriking peculiarity of this expreſſion, in oppoſition to his own definition of motive given in the preceding page, ariſes from DR PRIESTLY having here inadvertently uſed the term *Motive* for the object of the deſire, for example goods or money. His meaning is clear, though his expreſſion be vague and improper.

" tives.

" tives. If a maſter be actuated ſimply " by his anger, he will beat his ſervant " more violently, and continue the cor- " rection longer, in proportion to the *de-* " *gree* of his anger, or the apprehended " cauſe of his diſpleaſure; and kindneſs " operates exactly in the ſame manner, " a ſtronger affection prompting to great- " er, and more kind offices, than a weak- " er.

" Alſo oppoſite motives, as cauſes of " love and hatred, are known to ba- " lance one another, exactly like weights " in oppoſite ſcales. According to all ap- " pearance, nothing can act more inva- " riably, or mechanically. Is it poſſible, " then, that a philoſopher, obſerving " theſe conſtant and uniform appearan- " ces, ſhould not conclude, that the pro- " per cauſe of a man's actions are the " motives by which he is influenced? " Strengthen the motive, and the action " is more vigorous; diminiſh it, and its " vigour is abated; change the motive, " and the action is changed; entirely " withdraw it, and the action ceaſes; in-

" troduce an oppoſite motive of equal
" weight, and all action is ſuſpended,
" juſt as a limb is kept motionleſs by the
" equal action of antagoniſt muſcles. As
" far as we can judge, *motives* and *ac-*
" *tions* do, in all poſſible caſes, ſtrictly
" correſpond to each other." Pag. 30. 31.

In this ſuppoſed caſe, of the equal and oppoſite motives exactly balancing each other, and all action being ſuſpended, it is plain, that by *motives* muſt be meant *things*, ſuch as *paſſions*, *deſires*, &c. on the preference of any of which the underſtanding *has not decided*, and, what is more, *cannot decide*. That deciſion, or judgement, (which in fact is juſt what in common language we call choice, determination, will, &c. as I ſhall ſoon have occaſion to ſhew), is repreſented by all Neceſſitarians as quite involuntary, and completely determined by the motives (deſires) that are applied.

But ſurely any commentary on theſe paſſages muſt be needleſs. And it muſt be equally needleſs for me to declare, that in all

all my reaſonings on this ſubject, I have always employed the term *Motive*, *bona fide*, in what I conceived to be its proper ſenſe, and that in which it was uſed by MR HUME, DR PRIESTLY, and other philoſophers who have held the doctrine of Neceſſity; that my Eſſay has been carefully peruſed by *thirty* other perſons, all of them well qualified to judge of it in every reſpect, and many of them very unwilling to acquieſce in my reaſonings, and very deſirous to find an error in them, none of whom diſcovered or ſuſpected any ſuch innovation or perverſion of language on my part, as the author of the remarks imputes to me; that many of theſe perſons, on my communicating to them the remarks under conſideration, agreed with me in thinking, that the author of the remark in queſtion, and not I, was attempting an innovation in language with reſpect to the meaning of the term *Motive*, and that this innovation was equally unneceſſary and unavailing; that I had often converſed and argued, on theſe ſubjects, with the author of the remark, both *viva voce* and in writing, in the firm belief,

that we both of us meant the ſame thing by that term, and certainly without ever obſerving that either he or I fell into any thing like croſs-purpoſes in our reaſonings about *motives*, which I think *muſt* have happened if we had annexed different meanings to that word; that I never heard from him of any difference about the meaning of it, till ſome time after he had peruſed, and made ſeveral other objections to, thoſe ſections of my Eſſay in which I demonſtrate, that the things uſually called motives are not conſtantly conjoined with their reſpective actions. I therefore cannot help thinking, that the objection and inſinuation in queſtion is merely an expedient to avoid admitting my inference; that it is uncandid with reſpect to me, and altogether unavailing with reſpect to the queſtion at iſſue, or even with reſpect to my peculiar mode of reaſoning.

I cannot better ſhew how uncandid and unavailing it is, than by ſtating a parallel caſe, of the adopting an erroneous notion and opinion, and employing a mere

mere verbal expedient, to avoid giving it up even when ſhewn to be wrong.

A certain Prince of Orange, a man of good ſenſe, and much knowledge of the world, took notice of two prevailing vulgar errors: That peaceable men imagined that a ſoldier was *always* fighting; and, That a young girl imagined that a lover was *always*, *En etat.*

This wiſe Prince, who, I preſume, had been in his day both a ſoldier and a lover, knew better, and was well qualified to refute ſuch erroneous opinions. It cannot even be ſuppoſed, that with any man or any woman of good ſenſe and candour, he would find any difficulty in exploding the errors in queſtion; but if he had entered the liſts with a metaphyſical Burgomaſter of Amſterdam, or, for his ſins, had fallen into the hands of ſome little Metaphyſician in petticoats, (*Quale portentum neque militaris Daunia in latis alit eſculetis, nec Jubæ tellus generat, leonum arida nutrix*), I ſuſpect he would have been ſore put to it to have ſet them right, if they had

had unluckily fallen into the common errors. The Burgomaſter had only to ſay, that the man who was not *always* fighting was no *ſoldier* for him; and the girl had only to declare, that the man who was not *always En etat* was no *Lover* for her; and the wiſe Prince would certainly have had the worſt of the argument, and muſt ſoon have declined ſo unequal and ſo unavailing a conteſt.

Such I conceive to be the nature and force of the objection inſinuated againſt my argument; which I ſhould never have thought of anſwering, but for the reaſon already mentioned, namely, that two perſons, of whoſe talents and knowledge I have the higheſt opinion, have expreſſed their approbation of it. It appears to me ſomewhat ſtrange, however, that neither of them thought of ſuch an objection to my phraſeology and my mode of reaſoning, tho' both of them were well acquainted with my Eſſay for many months, nay for years, before thoſe remarks were written, and had often converſed with me about it, and even favoured me with various remarks upon

upon it in writing, which I have preſerved; and though ſuch a perverſion of language, and ſuch frivolous and uncandid reaſoning as are imputed to me by the inſinuation in queſtion, if real, muſt have been ſtrikingly obvious to them at firſt ſight.

It only now remains for me to point out, that ſuch uncandid and frivolous reaſoning was not only unintended, but quite unneceſſary on my part; for my mode of reaſoning will apply equally well to aſcertain the relation between *deſire* and *judgement*, (in the language of the author of the remark), as between *motive* and *action*, (in common language), and to ſhow, that what he calls *judgement*, or *the underſtanding deciding on the preference of any deſire of attainable good*, is a *voluntary* act of the mind; and not like belief, or judgement with reſpect to the truth or falſehood of a propoſition, which appears plainly to be *involuntary*.

The terms *Judgement*, or *deciſion of the underſtanding on the preference of a deſire*, as

as employed by him on this ſubject, are phraſes perfectly ſynonymous with *chuſing*, *preferring*, *reſolving*, &c.: ſo that, admitting his phraſeology with reſpect to *motive*, and its conſtant conjunction with action, his doctrine amounts to this only, that men always chuſe according to the motive according to which they chuſe, which is an identical propoſition that no perſon can diſpute; nor will any perſon diſpute, that a man, when not hindered by phyſical impediments, will *act* according to the motive according to which he chuſes. But the great philoſophical queſtion at iſſue is of a very different nature from theſe frivolous and almoſt identical propoſitions; it involves and eſſentially conſiſts in the inquiry, what is the relation between the voluntary actions of men, and thoſe deſires to which they are ultimately referred as the cauſes or principles of change from which they proceed? what is the relation between the perſon himſelf, or agent, and his voluntary actions? in particular, is he merely the ſubject in which thoſe actions take place, like effects in lifeleſs bodies, purely in conſe-

conſequence of the cauſes applied, or is he in part, and, if ſo, to what extent, and in what manner, is he, the author, cauſe, or principle of change, to which his actions ſhould be referred, as well as to the deſires, which are by all acknowledged as principles of change or of action.

The eſſential part of this inquiry may be aſcertained without meddling with the various intermediate ſteps, or links, of the proceſs of thought, or ſeries of events, between the deſire and the ultimate overt act: and I thought, and do ſtill think it better, to avoid the inquiry into thoſe parts of the proceſs which cannot be made the ſubject of open unequivocal experiment, and which require any appeal to conſciouſneſs; for this is little better than an appeal to the candour, to the natural capacity or talents, and to the acquired habits of attention and reflection, and of intenſe and ſteady thought without the uſe of words, (which are ambiguous and deceitful), of every individual with whom we may have occaſion to reaſon; but theſe accompliſhments, even in a moderate de-

degree, are very rare, and perhaps have never yet been poſſeſſed in abſolute perfection by any perſon.

But if any perſon ſhall chuſe to rely on his own qualifications in thoſe reſpects, he may eaſily apply my dilemma and my mathematical reaſoning to the point in queſtion, the relation between deſire and judgement of preference; the combination of which two things conſtitutes a motive, according to the phraſeology of the author of the remarks: and he will find it to be ſuch as neceſſarily to imply the exiſtence and occaſional exertion of the ſelf-governing power of the perſon, in order that the judgements of preference may be what we find them. Indeed for this purpoſe nothing more is required but a very ſlight change of expreſſion (*deſire* for *motive*, *judgement* for *action*) in SECT. VI.; for the firſt part of the dilemma, and in SECT. XVI. XX. and XXI. for the ſecond part of it: and if he ſhould be likely to bewilder himſelf by the uſe of ſuch hypothetical expreſſions and nugatory propoſitions as thoſe concerning the abſolute force,

force, ſtrength, or influence of deſires in producing judgements, he will find, *mutatis mutandis*, in SECT. XVIII. and XIX. a full elucidation of thoſe things.

The initial letters of the Alphabet will expreſs the *judgements* (ſuppoſed to be known by conſciouſneſs) juſt as preciſely as they would expreſs the overt actions of a perſon, that certainly might be known by obſervation. The final letters of it will expreſs the ſeveral *deſires* that may be excited in a perſon, juſt as well as they did the *motives* about which I reaſoned.

The relation between the *deſires* X, Y, Z, and the judgements of preference or expediency A, B, C, reſpectively, that is, correſponding each to each, A to X, B to Y, C to Z, *muſt be* either a *conſtant conjunction*, (which fully implies the want of any ſelf-governing power in the perſon or ſubject with reſpect to ſuch judgements), or it muſt be not a *conſtant*, but an *occaſional* and *ſeparable conjunction*.

If the firſt part of the dilemma be choſen, the ſix canons or axioms reſulting from the notion of conſtant conjunction, and ſtated in p. 172, and fully illuſtrated in the pages that follow it, muſt, in the firſt place, be either admitted or denied, before it be poſſible to reaſon on the ſubject: for all reaſoning muſt ultimately reſt on firſt principles, or acknowledged truths: and theſe canons are the firſt principles or axioms in this kind of reaſoning. Any reaſoner who chuſes to deny them, ſhould do it openly and explicitly; and when he has done ſo, I preſume he will find but few perſons diſpoſed to reaſon with him: and moſt aſſuredly I ſhould not be one of the few.

If he admit them, we may rationally proceed to inquire what the reſult *muſt* be in point of judgement of preference, in various particular inſtances, ſuch as often occur in real life, or may be produced by ſtudy and contrivance, and which may be diſtinctly conceived and expreſſed; it being underſtood, that if our reaſoning were to be ſtated fully, in the regular form of ſyllogiſm,

ſyllogiſm, one of thoſe axioms ſhould be the major propoſition, general and affirmative; the inſtance given, the minor, particular and affirmative; and that the concluſion may be left to the deciſion of thoſe who underſtand the rules of logic, or indeed of any perſons who poſſeſs the uſual intellectual faculties of mankind.

To prevent (if it be poſſible to prevent) any idle verbal diſputes about the *reality* of thoſe deſires, the relation of which to judgements of preference we mean to aſcertain, I beg it may be underſtood, that we ſuppoſe the ſtate, condition, or diſpoſition of the perſon or ſubject, both as to mind and body, to be ſuch, that every deſire, about which we have occaſion to reaſon, may and ſhall truly and *bona fide* take place in him, whether ſuch deſire be excited ſingly, or along with one or more other deſires; and this without regard to the degree or intenſity of any one or all of them: that therefore all caſes of madneſs, delirium, drunkenneſs, fever, ſtupor, or other diſeaſe, and all ſuppoſitions of ſuch intenſe appetites

tites or paſſions, like ravenous hunger, or furious anger, as may make a perſon inſenſible to or incapable of any other deſire, are expreſsly ſet aſide: and that we conſider only men in their ordinary ſtate, in full poſſeſſion of their various faculties, ſuſceptible of, and actually experiencing, every deſire that we have occaſion to ſtate: For example, a porter waiting for his chance of his ordinary employment, and truly deſirous to earn any and every ſhilling that may be offered him; a ſimple traveller really deſirous to preſerve both his money and his life; a rogue very deſirous to eſcape from the torture, and very deſirous to avoid being hanged; a rake very deſirous to re-eſtabliſh his health and his fortune, but at the ſame time *bona fide* deſirous to avoid ſwallowing naufeous drugs, and having a diſagreeable old woman for his wife.

The diſtinct conception, and the acknowledgement of the poſſibility, of ſuch caſes, from the oppoſition of different deſires, motives, or principles of action, are eſſentially neceſſary to my mode of reaſoning

ing on this ſubject, juſt as the admiſſion of the poſſibility of drawing a ſtraight line from any one point to any other, or of deſcribing a circle at any diſtance round any centre, is to the reaſonings of geometers: and I ſhould certainly have ſtated them formally as *Poſtulata*, if I could have ſuppoſed, that any intelligent or candid perſon would have heſitated to admit them, whenever, in the courſe of my reaſonings, there might be occaſion to refer to them. It is not yet too late to mention, that I do conſider them as undeniable *Poſtulata*: I mean ſuch as cannot be refuſed without a degree of abſurdity and want of candour, as glaring and as extravagant as it would be to refuſe the common *Poſtulata* of geometry. And I find now it is neceſſary to mention this explicitly, leſt, by ſome new diſtinctions, or new meanings to old words, which I regard as no better than a kind of metaphyſical legerdemain, the deſires, the *things* about which I wiſh to reaſon, without caring by what name they may be called, ſhould be conjured away from me, juſt as motives have been in the remarks under conſideration, and I ſhould

get

get in their ſtead ſome other word; a *vox et præterea nihil.* Of this indeed I find ſome very alarming ſymptoms in N° 11. page 476. line 17. *et ſeq.*; of which more fully afterwards.

Theſe things being premiſed, and my *Poſtulata* being ſuppoſed to be granted, I preſume it will be admitted immediately, that the relation between *deſires* and *judgements of preference or of expediency*, (N°5. line 9.), which *judgements*, (according to the phraſeology of the author of the remarks), in conjunction with *deſires*, conſtitute *motives* that are conſtantly conjoined with their correſponding *actions*, is not a conſtant but an occaſional and ſeparable conjunction. For though the reſult in the ſimple caſes of only one *deſire* being excited at once, might be foreſeen *a priori*, and would be found on trial to correſpond to the ſimple *formulæ* X ≡ A, &c. the *judgement* always correſponding to the only deſire that took place in the perſon who is to judge and to act; and though it *might be ſuppoſed* in all caſes of the direct *concurrence* of two or more *de-*

ſires,

ſires, and *would be found* in many of them, that the reſult, in point of judgement, would correſpond to the canon X + Y ≡ A + B; yet it would both be foreſeen *a priori*, and found on trial, that in numberleſs inſtances of the ſimultaneous application of two or more *deſires*, either in *combination* or in direct *oppoſition*, the reſult would not correſpond to the canons X ⌜ Y ≡ A ⌜ B, and X — Y ≡ A — B; for the *judgement* would be perfectly according to one of the *deſires*, and not in the leaſt according to the other of them. If any perſon ſhould heſitate to admit this, let him conſider, that it may eaſily be decided by open unequivocal experiment. For as the *judgement* according to the *deſire* is a *motive*, and as a *motive* is conſtantly conjoined with its proper *action*, the *action* muſt correſpond to, and be conſtantly conjoined with, every *deſire* according to which *judgement* took place. The experiment propoſed in page 226. may be tried by any perſon who is not confident that he can foreſee the reſult of it, and who does not perceive, that in the ordinary conduct of life *deſires* are not conſtantly

conjoined with *judgements*, ſo as to become *motives*.

Though the author of the remarks may not have foreſeen the important conſequences of this ſeparability of *deſires* and *judgements*, I preſume he will acknowledge it at once; and perhaps had perceived it at the time he uſed the expreſſions, "till the underſtanding decides on its preference, or on the expediency of attempting the purſuit of it," (N° 5.); for theſe expreſſions ſeem to imply the poſſibility and the frequency of the underſtanding *not* deciding on the preference or the expediency of ſome deſires, as well as deciding on the preference or expediency of others: the latter is the ſeparation, the former is the conjunction of *deſire* and *judgement*, about which we are now reaſoning.

Suppoſing, then, the ſeparability of *deſire* and *judgement* to be eſtabliſhed, either as intuitively evident, or as aſcertained by experiment, it muſt be evident, that, in this reſpect at leaſt, what the author of the remarks calls judging, or the underſtanding

ſtanding deciding on the preference of a deſire, &c. agrees perfectly with what in common language is called *chooſing*. Choice is an operation or modification of thought, according to one thing, and not according to ſome other, or preferring one and not another. Even in the ſimpleſt poſſible caſe of voluntary action, I mean that where only one deſire, and one kind of action, are to be thought of, there is always the alternative of acting or not acting, determining or not determining, according to the only deſire applied. Now, this is a kind of choice; in the language of the author of the remarks, it is a deciſion on the expediency of attempting the purſuit of a deſire.

As it appears, then, that the relation between *deſire* and *judgement* is not a conſtant, but an occaſional and ſeparable conjunction; we muſt next inquire, whether they are occaſionally conjoined, or ſeparated by mere chance, that is, ſtrictly ſpeaking, without any cauſe at all; or by ſome cauſe (ſuch as we conceive a living perſon or agent to be) having power to

conjoin or ſeparate them at his own diſcretion; that is, to *judge* or *not to judge*, according to any *deſire* applied. For it is ſelf-evident, (as already mentioned, p. 342.), that ſuch an occaſional conjunction and ſeparation cannot proceed from any cauſe that is conſtantly conjoined with its effect.

If the ſuppoſition of mere chance be choſen, (which is abſurd in itſelf, as well as inconſiſtent with the fundamental principle of the doctrine of Neceſſity), we may then inquire what proportion in point of frequency the conjunction bears to the ſeparation of *deſire and judgement*: we may aſſume any proportion of frequency between them, and, on the principles of the doctrine of Chances, we ſhall immediately have, by neceſſary conſequences, many extravagant and ridiculous inferences, too repugnant to the univerſal notions of mankind on theſe ſubjects to allow us even for a moment to doubt of their being falſe, or to make it neceſſary to try them experimentally: but let it be remembered, that this, if required, may eaſily

eaſily be done; for the *judgement* ſupervening on *deſire* is a *motive* conſtantly conjoined with its correſponding *action*; and this action is an object of direct perception and obſervation.

Laſtly, If *mere chance* ſhall be given up, and recourſe ſhall be had to the ſuppoſition of ſome peculiar quality of *deſires*, or ſome peculiar relation between them and *judgements*, in conſequence of which *judgements* came to paſs, in common caſes, according to ſome *deſires*, and contrary to others; and when this quality or relation was equal in two or more oppoſite or inconſiſtent *deſires*, no *judgement* of preference *could* take place according to any of them; then it will appear by the arguments page 360. to 400, that there neither is, nor can be in *deſires*, ſuch a quality, or ſuch a relation between them and *judgements*. And if any perſon ſhould not underſtand, or ſhould not like that mode of reaſoning, he may have recourſe to the reaſoning employed page 424. to arrive at a concluſion, which he may try experimentally, if he ſhall think it neceſſary ſo to

to do.——The ultimate concluſion muſt be, that thoſe *judgements* which ſupervening on *deſires* conſtitute *motives* conſtantly conjoined with actions, do not come to paſs in conſequence of any abſolute irreſiſtible force or quality or relation of *deſires*, but depend on, and neceſſarily imply in the perſon judging, ſome ſelf-governing power with reſpect to ſuch *judgements*.——Now, this is the other eſſential characteriſtic of *chooſing*, in contradiſtinction to what is commonly (and therefore properly) called *judging*; or of a voluntary as diſtinguiſhed from an involuntary action.

The practice of employing the term *judging* inſtead of *chooſing*, is very improper, becauſe it makes the expreſſion of our thoughts ambiguous, and conſequently our reaſonings obſcure and bad. It is by no means peculiar to the author of the marks; it has been adopted by many writers; it is common even in ordinary converſation to ſay, that a perſon thought fit or judged proper to act in a certain manner, when we mean to expreſs, not his involuntary

involuntary judgement, but his voluntary act or choice. It is a well underſtood piece of civility, to ſuppoſe a perſon's choice and actual conduct to be the reſult of his judgement, rather than of his unreaſonable paſſions or caprice. In many caſes the *choice* and actual conduct correſpond to the involuntary judgement; but in many caſes they are in direct oppoſition to it.

From want of due attention to theſe things, the maxim, *Voluntas ſequitur ultimum judicium*, came to be admitted as a kind of axiom; and it was long held as the fundamental principle of the doctrine of Neceſſity. I am well informed, that MR LOCKE, in the firſt edition of his Eſſay, had adopted that erroneous principle: but ſoon diſcovering the error of it, he very candidly renounced it in the ſecond edition. As I have not been able to procure a ſight of either of thoſe editions of his Eſſay, I cannot quote the preciſe paſſages. DR SAMUEL CLARKE, too, ſhewed that the maxim in queſtion was fallacious and nugatory, foraſmuch as what

what had been called the laſt judgement of the underſtanding was really the choice or voluntary determination of the perſon. I preſume the author of the remarks had not been aware of theſe things, elſe he would not have betaken himſelf to this argument of the Neceſſitarians; which has in a manner been given up for half a century, in favour of the doctrine of conſtant conjunction.

In N° 6. and the following paragraphs, he endeavours to avail himſelf of the maxim, That the deciſions of the underſtanding (which is a very needleſs, and therefore improper metaphor for *judgements*) are involuntary.

Before this important maxim can reaſonably be either admitted or denied, it is neceſſary to know exactly, how many and what ſort of operations of thought are to be comprehended under the terms *deciſions of the underſtanding*, or *judgements*: for theſe phraſes, at the diſcretion of the perſon uſing them, may be employed to denote very different things or thoughts; ſome

ſome of which may be voluntary, and others not. I conceive even that ſome latitude in this reſpect is allowed in common language; and a great deal certainly has been taken by metaphyſical writers. However, I can have no doubt, that, in ſtrict philoſophical language, the term *judgement*, or the metaphorical phraſe *deciſion of the underſtanding*, ſhould be uſed to denote certain thoughts only, ſuch as opinions of right and wrong, expedient or inexpedient, good or bad, true or falſe, which are commonly reckoned involuntary; and which in reality are *almoſt*, but not perfectly ſo. They cannot be perfectly involuntary, for this plain reaſon, that even for theſe kinds of judgements attention is requiſite, and attention is voluntary; not indeed perfectly, but in a great meaſure. To judge well and fairly on any point, a perſon ought to attend equally and impartially to all the conſiderations and circumſtances relating to it which are known to him, whether they tend to make him judge one way or another. But if he has already taken a ſide, or wiſhes to judge one way rather than another, he *may* attend, and

if he be not very much on his guard, he naturally and probably *will* attend, chiefly or ſolely to the conſiderations in favour of that judgement to which he already inclines; ſo that his final judgement will be partly voluntary: "For none want reaſons to confirm their will." POPE.

For example, in belief, or the judgement of what is true or falſe, when a perſon is impartial, and equally attentive to every article of the grounds of belief, the reſult is quite involuntary, whether it be belief on one ſide or on the other, or only doubt, from the oppoſition of different articles of evidence. Hence we have axioms, demonſtrations, and rules of logic, which reaſonable and candid men never preſume to controvert. But even in belief, as, for example, in judging of this controverſy about the doctrine of Neceſſity, and of my mode of reaſoning about it, a perſon, according to the ſide which he already favours, may either attend fully to every ſtep of my reaſoning, and yield to the influence of it, as being a ſeries of ſtrictly neceſſary conſequences; or he may

may attend very little to my argument, and be eager to lay hold of every example, and to employ every expreſſion, that can favour the oppoſite opinion; whether it be an objection to my argument, or whether it bear any relation to it or not: and, in conſequence of this voluntary withdrawing of his attention from my argument, and giving of it to the ambiguous phraſes and vague analogies on the oppoſite ſide, he may not feel the force or influence of it, though it were as complete a demonſtration as I think it.

But if it be meant to expreſs by *judgement* or *deciſion* what is commonly and properly called *chooſing*, the maxim in queſtion cannot be admitted: it is inconſiſtent with the very notion of *choice*. And more preciſely, and in a way better ſuited to my mode of reaſoning, by neceſſary conſequences, and open experiment, I ſay, that if they are uſed to denote any thing that involves choice, or is conſtantly conjoined with or followed by it, the maxim cannot be admitted. For though choice and overt action often correſpond to invo-

luntary judgement, yet they are often in direct oppoſition to judgement, or the involuntary deciſion of the underſtanding. As for example, in the caſe of *Medea*, ſo happily ſtated by OVID, that his lines are become proverbial, as expreſſing clearly a very common ſtate of mind, and mode of actual conduct:

Sed trahit invitam nova vis; aliudque cupido,
Mens aliud ſuadet. Video meliora, proboque:
Deteriora ſequor.

Here we have choice and action againſt involuntary judgement. The firſt line expreſſes, in ſtrong metaphorical language, the deſires: the ſecond line expreſſes clearly the involuntary operation of thought, or deciſion of the underſtanding: *Deteriora ſequor* expreſs the ultimate choice and actual conduct according to the deſires, and againſt the deciſion of the underſtanding. To call the *deteriora ſequor* judgement, as well as the *video meliora, proboque*, in a ſtrict philoſophical inveſtigation, the object of which is to aſcertain the differences among certain operations

rations of mind, would be highly improper; and to ſuppoſe it involuntary, becauſe it was expreſſed (no matter whether purpoſely or accidentally) by a term *(judgement)* uſually and properly employed to denote an involuntary operation of mind, would be abſurd. The name given to it can no more affect its nature, than giving one individual the proper name of another can make them two one; or than extending the generic names of *Bird* and *Fiſh* to denote both thoſe kinds of animals, can make birds fiſhes, or fiſhes birds.

If I were to employ the term *Will* or *Choice*, (or any other commonly uſed to denote the voluntary operations of thought), to expreſs judgement, belief, or any other involuntary operation of thought, I dare ſay, neither the author of the remarks, nor any other perſon, would think it any proof of judgement or belief being voluntary. The caſe I here put will perhaps be thought extravagant; but it is a real one, and may be found in a book which is ſtill regarded as good authority in point of

of Engliſh, and was once thought of great authority in ſome other reſpects: "For "the good that I would, I do not; but the "evil which I would not, that I do," ROM. vii. 19.——Here *would* expreſſes judgement, or the involuntary act of the mind, and correſponds perfectly to *meus aliud ſuadet*, and *video meliora, proboque*; while *would not* expreſſes will or choice, the voluntary operation of thought, and correſponds to *aliudque libido ſuadet*, and *deteriora ſequor*. ST PAUL ſurely never meant to ſay, that he choſe, reſolved, and attempted to do the good, but could not accompliſh it, as a man in a palſy might endeavour in vain to walk; nor that he did the evil in ſpite of his choice and attempts not to do it, as in certain diſeaſes any attempt at the moſt proper motion with the hand will fail, and either the moſt ridiculous geſticulations, or the moſt painful convulſions, will take place in its ſtead. We conceive that he meant, that, notwithſtanding his judgement of what was good and evil, "the ſin that dwelled "in him" made him *chooſe* and *do* the evil, and not the good.—As ST PAUL was not only

only a great Apoſtle, but alſo a great metaphyſician, and had moreover a ſtrong bias towards the ſyſtem of Neceſſity, tho' on principles ſomewhat different from thoſe that I have been conſidering, I truſt his authority on this point will have great weight with all orthodox Neceſſitarians.

N° 6.

The involuntary nature of the deciſions of the underſtanding, or judgements, can be admitted only with the explanations and exceptions already mentioned; which exclude choice or determination from the claſs of judgements, or even from being conſtantly conjoined with, or always correſponding to, preceding or co-exiſting judgements. As to the author of the remark ſeeing no reaſon to doubt, that an opinion of what is preferable, or otherwiſe, is equally involuntary as a judgement of what is true or falſe, it muſt be his own fault, in not giving due attention to the many great and obvious differences between them; ſome of which have generally

rally been acknowledged as ſelf-evident, and as ſuch I have mentioned them in this Eſſay, pag. 12. 13.; and others, in SECT. VIII. pag. 209. 220. I have illuſtrated very fully; and I think it unneceſſary to repeat here what is there ſaid. The term *Preferable*, as employed in N° 6. is ſtrikingly ambiguous; and the opinion expreſſed in the laſt ſentence of it, concerning the variations which are ſaid to occur in a perſon's (involuntary) judgements of what is preferable or otherwiſe, according to the ſtate of his health, or other circumſtances, appears to me altogether erroneous; but I forbear to enter on the diſcuſſion of theſe points, as not being eſſential to my argument.

N° 3. pag. 470. l. 13.—"And then, *by having recourſe to the known laws of phyſics*, it is proved," &c.—By no means: I never dreamed of having recourſe to the known laws of phyſics for any ſuch purpoſe: I know well that it would be in vain to do ſo, and fooliſh to attempt it. To have argued, that becauſe lifeleſs bodies had certain properties, and certain relations

lations to the cauſes of the changes of which they are ſuſceptible, living perſons muſt have the ſame properties, and the ſame relations to the motives of their actions; and that, becauſe a certain reſult took place in certain caſes in phyſics, a ſimilar reſult in the actions of men muſt take place in ſimilar caſes of the application of motives, (which I preſume is the meaning of the phraſe, *having recourſe to the known laws of phyſics*), would have been abſurd. It would juſt have been falling into the ſame error that the aſſertors of the doctrine of Neceſſity have fallen into. But my plan, and my actual conduct, have been very different. I have had recourſe to no laws of phyſics, nor to any laws whatever, but the laws of human thought with reſpect to the perception of certain neceſſary conſequences, bearing that kind of relation to the notions of event, cauſe, conſtant conjunction, or occaſional conjunction of theſe, *inertia* of the ſubject, and abſolute irreſiſtible force or influence of cauſes, that the theorems of geometry bear to the notion of quantity. Thoſe neceſſary conſe-

quences are found experimentally true in numberleſs inſtances in phyſics, but falſe, and even ridiculous, in numberleſs ſimilar inſtances of the application of motives. Whence I infer, that the principles of *inertia* in the ſubject, conſtant conjunction of cauſe with event, and abſolute irreſiſtible influence of cauſes, from which they are all ſtrictly deduced, *muſt* be falſe with reſpect to living perſons, and the motives of their actions, but *may* be true, and *probably are* true, with reſpect to lifeleſs bodies and phyſical cauſes and effects. To give a different account of the *object* or of the *manner* of my reaſoning in this Eſſay, is to miſrepreſent it.

I am not perfectly ſure, but I preſume, that the author of the remark alludes to the compoſition of motion, as a law of phyſics to which I had recourſe. If ſo, he is quite miſtaken. In the firſt place, It is not called nor thought a law of phyſics, any more than the fifth propoſition of EUCLID is called or thought an axiom of geometry. It is given by NEWTON as a corollary, a kind of theorem, reſulting

ing from certain principles, more general and more ſimple, which are called Laws of Nature. In the ſecond place, So far am I from having recourſe to it as an ultimate principle or law of phyſics, that I have offered a demonſtration of it, different from NEWTON's, and, as I think, more complete than his, as it ſpecifies all the laws of phyſics, and of human thought, on which the truth of that theorem as a matter of fact, and our belief of it as a neceſſary truth, demonſtrable from certain principles, ultimately depend. The application of the term *Law* in this ſenſe is no doubt in ſome meaſure arbitrary; it is a metaphorical expreſſion, employed to denote ſome very general ſimple facts with reſpect to the properties and relations of bodies; which can no more obey laws, in the literal ſenſe of this word, than they can underſtand them, or riſe in rebellion againſt them. But ſome regard is due even to the eſtabliſhed metaphorical ſenſe of the term; and I dare ſay the author of the remark himſelf would be ſenſible of the impropriety of ſpeaking of the cur-

vilinear path of a projectile, or of a planet, or of the formation of a rainbow, as *laws* of phyſics: yet they are juſt as much ſo as the compoſition of motion.

N° 9.

" If the Neceſſitarians muſt yield, that every apprehenſion and deſire of attainable good muſt have an influence on the underſtanding, *in a manner perfectly ſimilar to that of forces in phyſics*, in order to be intitled to maintain, that its operations proceed by immutable laws, *and that the relation of conſtant conjunction takes place among them*, the ſubſtance of the argument in the Eſſay would, I think, ſtill remain ſolid, notwithſtanding what has been remarked."

Allowing the affected uſe of the phraſe, " apprehenſion and deſire of attainable good," (inſtead of motive), and the improper and ambiguous uſe of the word " underſtanding," (inſtead of the agent, or perſon to whom the motives are applied), to paſs without diſcuſſion, I muſt obſerve,

obſerve, that there is plainly inſinuated, for it is not directly aſſerted, in this remark, a very erroneous and unfavourable, or, in one word, a moſt unjuſt account of my argument and my concluſions in this Eſſay. Any perſon reading N° 9. and knowing nothing more of my argument than what he could gather from that remark, regarded as an objection to it, would ſurely think that I had been reaſoning about the operations of the underſtanding; whereas I was reaſoning only about motives and voluntary actions, which are as different from operations of the underſtanding as ſeeing is from hearing, or underſtanding from ſmelling. Such a perſon would alſo conceive, that I had been aſſerting the mutability of the laws of the operations of the underſtanding; which is an abſurdity that I never dreamed of, and of which not one word is ſaid in the whole of my Eſſay. Even allowing the term *Underſtanding* to expreſs, not what it commonly does, but choice and voluntary action, (which is a licence juſt as needleſs, and as unavailing, as it would be to employ the term *Smelling* in the ſame meaning),

ing), ſtill it will be found, that I never call in queſtion the immutability of the laws of choice and voluntary action. I only endeavour to aſcertain what thoſe laws (or general facts) are; particularly whether the agent, or perſon chooſing, is merely the *Subject* in which the choice comes to paſs, or the *Author* of the choice, and whether the relation between motive and voluntary action be a conſtant conjunction or not. Whatever thoſe laws might be found in theſe and many other reſpects, I could have no doubt of their being the ſame in all ages and countries, and immutable, at leaſt by any human power; whatever they might be as depending on the will and power of the Supreme Being, who has made man what he is. Such a reader would ſuppoſe, too, that I had confounded the notion and queſtion concerning the immutability of the laws of the underſtanding, with thoſe of the conſtant conjunction among the operations of the underſtanding, which I had never done; and that I had denied the conſtant conjunction of the operations of the underſtanding, which, far from either

ther aſſerting or denying, I had not even conſidered nor mentioned.

But, above all, ſuch a reader of this remark (N° 9.) would underſtand, that I had maintained, and moſt particularly inſiſted on the point, that "every apprehenſion and deſire of attainable good (that is, every motive) had an influence on the underſtanding, (that is, on the perſon who underſtands, judges, chooſes, and acts), *in a manner perfectly ſimilar to that of forces in phyſics;* and that this principle, of the perfect ſimilarity of the influence of deſires, and that of forces in phyſics, was eſſential to my argument. This inſinuation is too plain to be miſunderſtood, and too important to be overlooked; and from the manner in which it is expreſſed, and from the uſe that is made of it, for it is the baſis of all the reaſonings about the underſtanding and will that appear in the remarks, it ſeems not to be accidental, but intended. But nothing can be conceived more groundleſs in itſelf, or more unjuſt with reſpect to me. From the way I ſtate the queſtion, and

and bring it to the form of dilemma, from the way in which my axioms or canons are expreſſed, from the whole tenor of my reaſoning, and from the numerous illuſtrations that have been given of it, it *muſt* appear, that my reaſoning and my concluſions are quite independent of all ſpeculations with reſpect to *perfect ſimilarity*, and to numberleſs *ſuppoſeable or real differences* of *manner* in the influence of *motives* and of *forces*. Nay more, all this has been ſtrongly and repeatedly mentioned in the courſe of my Eſſay, (as for example in pag. 84. 85. 86. 232. 233. 332. 336. 453. 454.), with a view to prevent ſuch *miſtakes* as thoſe at preſent under conſideration: but this I find is impoſſible. If my argument had depended, according to the inſinuation N° 9. on the aſſumed principle of *perfect ſimilarity of manner*, it would not have deſerved the name of reaſoning; for ſuch a principle could never be admitted, as it is intuitively falſe and extravagant.

If ſuch miſrepreſentations of my mode of reaſoning had occurred in a deſultory

viva

viva voce argument, they might have been regarded as mere miſtakes, from haſte, and imperfect expreſſion, and imperfect underſtanding of the argument, by one or both of us: though it muſt be obſerved, that miſtakes always on one ſide, and always unfavourable to the perſon miſtaken, are very ſuſpicious, and, to ſay the truth, barely credible. But in deliberate reaſoning in writing, or in print, as in the preſent caſe, where every part of the argument is expreſſed accurately, and illuſtrated fully, and remains even for months under the inſpection of the perſon who means to object to it, and who has it in his power to take the very words of any obſervation, or opinion, or argument, or principle, which he means to controvert, (as the author of theſe remarks has very properly and candidly done in N° 12.), there can be no miſtakes; and any unjuſt and unfavourable account of the reaſoning, given with a view to found objections to it, muſt be regarded as wilful miſrepreſentation; which is equally uncandid and unavailing. It is, however, ſo common in controverſies, even among

philoſophers, that it is generally expreſſed, and reprobated, by the well-known and appropriated metaphor, of ſetting up a man of ſtraw, in order to have the pleaſure of knocking him down. Such *miſtakes* in *viva voce* diſputation, eſpecially if aſſerted confidently, and in a boiſterous overbearing manner, may procure to the party employing them the tranſient appearance of victory in the argument, by confounding and putting to ſilence his opponent, who, if he has any ſenſe at all, will not perſiſt in reaſoning with one that cannot or will not underſtand what he ſays. But in deliberate written diſcuſſion, addreſſed not to one man, or one company, but to men of ſcience in general, in which the object is not victory, but the inveſtigation of truth, and the advancement of ſcience, they cannot ſerve even that little purpoſe, nor indeed any purpoſe that I can conceive. This I mention purely for the ſake of ſcience, and not for the ſake of thoſe who may chooſe, and who are heartily welcome, to amuſe themſelves in that way; nor yet for my own ſake, as I am ſure I ſhall eaſily be believed, and ſhall not even be thought particular

particular in my taſte, when I declare, that in all caſes, literal or metaphorical, in which I may have occaſion to be knocked down, I ſhould chooſe to undergo that ceremony by proxy, as in the preſent caſe, rather than in perſon.

With reſpect to that extravagant and needleſs *petitio principii*, "That *deſires* muſt have an influence on the underſtanding, *in a manner perfectly ſimilar to that of forces in phyſics*," which, in N° 9. is ſo unaccountably repreſented as neceſſary to my argument, and ſo by implication is imputed to me; I beg it may be obſerved, that, far from having aſſumed any thing ſo unreaſonable and unneceſſary, and ſo evidently falſe, I have aſſumed no *petitio principii* whatever. The nature and form of my argument, which is indirect, or *ad abſurdum*, and a dilemma, made all aſſumptions of that kind perfectly needleſs. This is mentioned expreſsly, page 79. line 10. *et ſeqq.*; but it has not been attended to by the author of the remarks. Thoſe who wiſh to judge of my reaſoning, will find *no petitio principii* in it with re-

ſpect to the *manner* of the influence of *motives* and of *cauſes*. They will not find themſelves called upon to admit *any* thing till it be ſhewn, either intuitively or by a ſhort ſeries of neceſſary conſequences, that it *muſt* be true, foraſmuch as the direct contrary of it is falſe or abſurd.

Thus they may deny, and all Neceſſitarians certainly will deny, my propoſition page 171; but to deny *it* is to aſſert the direct contrary of it; for ſuch aſſertion and denial are correlative notions, and convertible expreſſions. That *contrary* is the principle from which I reaſon *ad abſurdum*.

They may next take their choice of the two ſuppoſitions, that of conſtant conjunction and that of ſeparable conjunction, as the relation between cauſe and effect, motive and action, reſpectively; it being previouſly ſettled, both by verbal explanation, and by particular inſtances and illuſtrations, that by *conjunction* is meant the coming to paſs of effect, and the doing of overt action, correſponding

to

to the cauſes or to the motives applied; that by *conſtant* is meant *this* always being the caſe; by *ſeparable*, *this* only ſometimes being the caſe.

If they chooſe the ſuppoſition of conſtant conjunction, they ſhould next conſider the axioms reſulting from it; and they *muſt* either admit them as expreſſed by X and Y, A and B, without regard to ſimilarity or difference, or any circumſtance of manner, and indifferently with reſpect to cauſes and effects, motives and actions, or they *muſt* deny them. If they chooſe to deny them, they can proceed no farther in reaſoning with me; but will have the pleaſure of maintaining a direct contradiction in terms, to wit, that effect comes to paſs correſponding to a cauſe, and that action is done correſponding to a motive applied, when no effect, and no action correſponding to ſuch cauſe or motive, take place.

This the author of the remarks, who wiſhes to maintain the principle, or rather to retain the expreſſion, of conſtant conjunction,

junction, ſeems to have been aware of; and he has employed a very ſingular expedient to avoid aſſerting ſuch palpable contradictions, N° 11. p. 476, l. 17. *et ſeqq.* " If it is aſked, What becomes of the appetite for the half-guineas? I anſwer, That it *has had all the effects that*, by the immutable laws of the underſtanding, *it was fitted to have*."——This vague and ambiguous expreſſion is a mere evaſion, and an attempt to confound our reaſonings on the ſubject, by employing the ſame phraſe to denote two things, not merely different, but diametrically oppoſite, and things of ſuch importance, that the whole reaſoning in the dilemma ultimately depends on our conceiving them clearly, and always expreſſing them diſtinctly. " All the effects it was fitted to have," may mean no effect at all, or effects totally different in kind, as well as in degree, from what it would have had at another time, or at that very time, if no other motive had been applied, nay, even though many other motives had been applied, provided only the perſon had choſen and acted according to it. Let us conſider,

ſider, then, what theſe effects are which it is ſaid are all it is fitted to have. " It was *felt*." The feeling of an appetite, deſire, or motive, is the ſame with the exiſtence of it: a deſire that is not felt, is as arrant nonſenſe as a pain that is not felt; and to repreſent the feeling of a deſire as the effect of it, is as nugatory as to call feeling an effect of pain. " *Obſerved*" only another word as nugatory as *felt*, when employed to denote a ſuppoſed effect of a deſire. " Its inferiority to a deſire, the gratification of which was incompatible with it, perceived:" A new metaphor uſed to ſignify the *not* willing, or chooſing, or deciding, or judging, according to the deſire; and preciſely what in this inveſtigation is reckoned the *no* effect or influence of a motive, and, in my phraſeology, is the *ſeparation* of motive from its correſponding judgement, choice, or will; which, however, I avoid reaſoning about, as I prefer the ultimate overt act for the ſubject of obſervation and experiment. If the author of the remarks has any good reaſon for wiſhing to call the *feel-* " *ing* and *obſerving* a deſire, and *perceiving*

its

its inferiority to another incompatible with it" all the effect it is fitted to have, he ſhould be gratified in his wiſh, though it muſt appear an odd one: but then care muſt be taken not to expreſs any thing elſe by the ſame phraſe; particularly never to employ it to denote the perceiving the *ſuperiority* of any deſire, and judging, willing, and acting according to it, and never to miſtake *theſe things* for the effects of ſuch deſire, and all the effects it was fitted to have; but, on the contrary, always to regard theſe *things*, which are the oppoſites of the others, as *no effects* of ſuch deſires as they correſpond to; and, in my phraſeology, to call them inſtances of the ſeparation of motive and action. And then my mode of reaſoning, *mutatis mutandis*, that is, intercharging or reverſing the meanings of a few phraſes to which I have no particular attachment, will ſtill remain valid. The dilemma depends not upon the *phraſes*, conſtant or ſeparable conjunction, having or not having effect, or all the effects any thing was fitted to have, but on the *notions* of [illegible], whether effect or action, *always* or only

only *ſometimes* coming to paſs, *according* to every cauſe or motive applied.

Theſe two notions are eſſentially different, and neceſſarily imply very different conſequences; which may be traced *a priori* by ſtrict reaſoning, and may be tried experimentally. For the purpoſe of ſuch reaſoning, it is requiſite that the two notions be uniformly expreſſed by different terms, or ſymbols, viſible or audible: but it is of no moment what theſe terms or ſymbols are, provided only they be well explained and illuſtrated, and each of them be always uſed in but one meaning. *With* ſuch explanation and care, the letters P and Q, or the words *Beef* and *Pudding*, or any two new words that the moſt whimſical philoſopher could contrive, would completely anſwer every purpoſe of good reaſoning; *without* ſuch explanation and care, no words nor phraſes that could be contrived would enable us, or indeed allow us, if we made uſe of them, to reaſon ſtrictly and diſtinctly about the two notions, and their reſpective neceſſary conſequences.

It is unreaſonable in the higheſt degree, to call " perceiving the inferiority of a motive, and judging another preferable to it," ſuch motive having effect, and all the effects it was fitted to have; becauſe it is contrary to the eſtabliſhed uſage of language, and to the analogy, always to be acknowledged, between the relation of motive and action and that of cauſe and effect in phyſics; and alſo becauſe it tends to prevent us from diſtinguiſhing, as we ſhould do, *that kind* of effect of motives from the *other kind* of effect of them, analogous to the effect of phyſical cauſes, and ſhewn by voluntary action being done according to them. But allowing them both to be called effects of motives, it muſt be allowed that they are of very different kinds; and that they might be, and for the purpoſe of diſtinct reaſoning ought to be, expreſſed by different *ſpecific* or *trivial* names: For example, let one of them be called *ſuperior*, and the other *inferior* effect. This being explained, we may reaſon about them as ſtrictly as before, and will ſoon arrive at the ſame ultimate concluſion.

The

The firſt difference we ſhall diſcover between the relation of motive and action and that of cauſe and effect in phyſics, will be, that in the latter the effect *ſeems to be* always of one kind only, to wit, *ſuperior;* while in the former it is *certainly* ſometimes *ſuperior*, ſometimes (indeed much oftener) *inferior.*

Next, we muſt inquire how this comes to paſs, whether it is by a ſelf-governing power in the agent, in conſequence of which, though he cannot hinder every motive applied to him from having all the effect it was fitted to have, he can, at his own diſcretion, make that effect inferior or ſuperior? or is it by mere chance that the effect, conſtantly conjoined with the motive, is ſometimes of the one ſometimes of the other kind? Or does this depend on any abſolute force, or influence, or quality, of the motives, or on any relation of them to one another, and to the perſon?

The obſervations and reaſonings in the ſixteenth and following ſections, (which,

with only a trifling change of terms, are ſtill perfectly applicable to theſe queſtions and ſuppoſitions), will ſhew, that the occaſional variety in the effect of motives is not a mere matter of chance, and does not depend on any abſolute force of them, but implies the exiſtence and very frequent exerciſe of ſuch a ſelf-governing power in the agent.

The ultimate concluſion will be, that the liberty of human actions, and the difference between the relations of cauſe and motive, eſſentially conſiſt in this, that there is in a living perſon, and not in a lifeleſs body, a power of making the effect of any cauſe applied, *ſuperior* or *inferior*; which, though different in *ſound*, is the ſame in *ſenſe* with making ſuch cauſe have effect or not have effect.

But to return to the conſideration of all the effects of a motive or deſire according to which a perſon does not act, p. 476. l. 25. " that gratification (i. e. of another deſire) judged preferable to it accordingly." This (due allowance being made for the

the peculiar phraſeology of the author of the remark) is juſt what we uſually call the effect of ſuch *other* motive, and the want of effect of that one whoſe effect, on the ſuppoſition of conſtant conjunction, we were inquiring after.

To this enumeration of the effects of a deſire, which we ſhould be apt to think had none at all, is ſubjoined a very important, but inadmiſſible hypotheſis, intended, I preſume, to prevent any further inquiries about the deſire and its effects; " and it then probably ceaſed to exiſt, and was forgotten." This is in the higheſt degree improbable, indeed ſcarce credible, even in the caſe ſtated, chooſing to earn a guinea rather than half a guinea. To me it appears much more probable, that the porter, though he would prefer the guinea, would ſtill feel a good appetite for the half-guinea, and that he would remember it as long as he lived.

But even if we could ſuppoſe, that the porter ſhould in a moment ceaſe to hunger after the half-guinea, and completely forget

forget every circumſtance about it, it will be difficult or impoſſible to apply the ſame arbitrary hypotheſis to every caſe of X — Y, where the reſult is A, inſtead of A — B. When a perſon endures the toothach for a long time, rather than ſubmit to the operation which would give him relief, does the pain really ceaſe to exiſt? Does the patient ceaſe to feel it? Does he *bona fide* forget it? Can he, with a ſafe conſcience, declare, that he has no abhorrence or diſlike of it, and no deſire to be freed from it? If theſe things are ſo, they will be joyful tidings to many people, who muſt impatiently wiſh for the confirmation of them: they will likewiſe afford ſome good corollaries, extremely comfortable to thoſe who are afflicted with the ſtone.

With reſpect to the uſe which I have made of the phraſe *conſtant conjunction* in my argument, it has been uniformly the ſame, both when it was applied to motives and actions, and when it was applied to phyſical cauſes and effects; namely, to denote the ultimate viſible effect in the one relation,

relation, and the ultimate overt action in the other, *always* correſponding to, or being according to, any and every cauſe or motive applied. This uniformity of the meaning of it is eſſential to my mode of reaſoning; and, at any rate, I ſhould have thought the uſing any ſuch phraſe in two or more different meanings in the ſame treatiſe, abſolutely inconſiſtent with every kind of good reaſoning. The only meaning in which I have uſed it, is that in which (for reaſons fully ſtated already, p. 28. 29. 30. 142.—146.) I conceive MR HUME, the introducer of it, and DR PRIESTLY, one of the lateſt and greateſt writers on the controverſy about liberty and neceſſity, to have always uſed it; and certainly my meaning of it correſponds perfectly with all the inſtances and illuſtrations of their ſyſtem which thoſe authors have given, ſeveral of which have been already quoted in this Appendix, (p. 542. to 546.)

It was not only unneceſſary for my mode of reaſoning, but abſolutely inconſiſtent with it, to lay any ſtreſs upon, or even

even to take into conſideration, the circumſtances of *manner* of the conſtant conjunction, about which I reaſoned. My plan was, to reaſon by neceſſary conſequences from the principle to be refuted, to concluſions that might be tried by open experiment, without making any appeal to conſciouſneſs, or leaving any room for doubt or conjecture. But this could be accompliſhed only by attending to the ultimate reſult in viſible effect or overt action, about which there could be no diſpute; while, with reſpect to the *manner* in which that reſult came to paſs, there might be everlaſting altercation.

Let the *manner* of the *conjunction* of cauſe and effect in phyſics be ſuppoſed as different as poſſible from the *manner* of the *conjunction* of motive and action, only let the conjunction in both relations be *conſtant*, and the whole of my reaſoning from the dilemma and axioms to the laſt inference muſt remain unſhaken, and all my concluſions will be found ſuch as may be tried experimentally: For example, let the manner of the conjunction of cauſe and

effect

effect in phyſics be ſuch that there is but one ſtep between them, and that one a mere change of ſtate in body, and in no degree intellectual: let the manner of the conjunction of motive and action be ſuch, that there ſhall be always ten thouſand ſteps between them, every one of which is purely intellectual, or a proceſs of thought, not connected with any change of ſtate in body; and let theſe ſteps be called *Underſtanding*, *Intelligence*, *Apprehenſion*, *Judgement*, *Will*, &c. &c.; and let every one of them be a fit ſubject for endleſs diſpute, requiring always appeals to conſciouſneſs; ſtill, if the conjunction of motive and action be *conſtant*, the action correſponding to the motive muſt take place, as invariably on the application of it, as if there had been but one ſtep between them: for its not taking place in any caſe, would be an unequivocal inſtance of the conjunction between them not being conſtant, but ſeparable, and in that caſe being actually ſeparated.

Were we even to ſuppoſe, that by the interpoſition and co-operation of ſome

other *kind* of cauſe, (as, for example, an Agent or living Perſon), the whole chain or ſeries between the motive applied and the ultimate overt action performed, ſhould be varied on different occaſions, being ſometimes a train which (to avoid all idle diſputes about words) we ſhall expreſs by G, H, I, K; at other times a different train, which we ſhall call P, Q, R, S; ſtill it muſt be evident, that, whichever of theſe be the interpoſed train, if the firſt and laſt ſteps of it (X and A, Y and B, &c. reſpectively) be conſtantly conjoined, the reſult from the ſimultaneous application of X and Y muſt be what I have ſpecified in the axioms; for the want of either A or B in the ultimate reſult would be *ipſo facto* proof of a ſeparation having taken place, contrary to the principle of conſtant conjunction.

The author of the remarks muſt ſurely have attended but very little to my inſtances and illuſtrations, and muſt have had but a very imperfect and erroneous notion of my plan, and of my principles of reaſoning, when he hazarded the aſſertion

tion in the beginning of N° 9. that " the queſtion, therefore, turns on the nature of the operations of the underſtanding." This is perfectly groundleſs: they may be whatever he pleaſes to call them, without in the leaſt affecting my argument, which I have *purpoſely* taken care to make quite independent of them.

As little was he aware of the nature and force of my reaſoning, when he employed, in anſwer to it, ſuch vague, hypothetical, and metaphorical expreſſions as the following, " That the *will* is not, and need not be expoſed to ſuch combinations or oppoſitions of influences," N°4. —" That a *judgement* will never be *pronounced* by a perſon in favour of two purſuits, at one and the ſame time, that are incompatible," N° 7.—" Since the *act* of the *will* depends on an *operation* of the *underſtanding*, which is itſelf involuntary, and *excludes* all thoſe *abſurd* combinations of influence alluded to," N° 8. — " The *intelligence* of the *mind renders* the combination impoſſible," N° 11. l. 16.— " The ſufficiency of the *underſtanding* for this operation (judging one purſuit *eligible*,

without abſurdly combining it with another) ſeems to be the natural reſult of its *intelligence*, which *differences* that faculty ſo infinitely from every thing that is *expoſed* to the *influence* of external force," N° 12.—" If the *acts* of the *will* are not *determined by* the *judgements* of the *underſtanding*, but *by* a ſelf-governing *power*, which may *act* without motives," &c. N° 16.

It muſt be obvious to every perſon, that the needleſs uſe of theſe expreſſions tends greatly to perplex and to fruſtrate our reaſonings, by withdrawing our attention from the real acts and operations of the *only agent* we have to reaſon about, I mean the *perſon* to whom the motives are ſuppoſed to be applied; and by making us attend to the *fancied acts* of many *imaginary agents*, ſuch as will, judgement, underſtanding, power, &c. This is mere metaphor, and a kind of poetry; it is " giving to airy nothings a local habitation and a name." They are as truly imaginary beings as the Sylphs and Gnomes, who make ſo great a figure in the *Rape of the Lock*; where indeed they are in their proper

proper place: Not that I think metaphors can be, or ought to be, confined to poetry alone; the poverty of language makes them neceſſary, both in common diſcourſe, and in ſome meaſure perhaps in ſcientific inveſtigation. And even if a language could be contrived, both for the purpoſes of common life and of ſcience, as preciſe and literal as the language of EUCLID, I believe few people would uſe it: it would be exceedingly dull; for nothing contributes ſo much as the occaſional uſe of metaphors to adorn, to enliven, and to enforce the expreſſion of our thoughts. But whatever uſe we may make of them, we ſhould at leaſt remember, that they are but fictions; and that to attempt to avail ourſelves of them, as if they were literal expreſſions of philoſophical truths, is as unreaſonable as it would be to tranſfer the machinery of the *Rape of the Lock* to the intercourſe of real life. Every body is pleaſed with the diſpoſition that *Ariel* makes of his flimſy legions, and approves of the employment of the fifty choſen Sylphs, who are ſtationed to guard the petticoat of *Belinda*. But in the

the actual intercourſe of belles and beaux, the former have no ſuch airy guards to defend them: if due care be taken of the petticoats, the belles, not the Sylphs, have the praiſe and merit; if any ſiniſter accident befal them, the belles alone muſt bear the blame. To attribute agency, and praiſe or blame, to their or to any perſon's underſtanding, or will, &c. &c. for their conduct in any caſe, is almoſt as far removed from literal philoſophical truth, as it would be to attribute ſuch agency and praiſe or blame to the Sylphs and Gnomes.

The only inſtance I can at preſent recollect of this kind of attempt having been openly and avowedly made in a ſerious diſcuſſion, is that in the hiſtory of *John Bull*, when he was endeavouring to ſettle accounts with his friend *Nic. Frog*. *John* found always in *Nic.*'s accounts two ſwinging articles to *Major Ab.* and *Major Will.* which he could not underſtand.

" *John Bull.* But who the devil are thoſe two *Majors* that conſume all my money?

ney? I find they always run away with the balance in all accounts.

" *Nic. Frog.* Two very honeſt gentlemen, I aſſure you, that have done me ſome ſervice. To tell you plainly, *Major Ab.* denotes thy greater *ability*, and *Major Will.* thy greater *willingneſs*, to carry on this law-ſuit. It was but reaſonable that thou ſhouldſt pay both for thy *power* and thy *poſitiveneſs*.

" *John Bull.* I believe I ſhall have thoſe two honeſt *Majors* diſcount on my ſide in a little time."

I would by no means inſinuate, that either the author of the remarks, or any other metaphyſicians, have borrowed their *Dramatis perſonæ*, Will, Underſtanding, Power, &c. from worthy *Nic. Frog*; but it is plain, not merely from the ſimilarity of their names, but from the ſtriking family-likeneſs among them, that their perſonages and his are very near akin; though perhaps they never met before: and I am happy in this opportunity of introducing

troducing them to each other's acquaintance.

If I, a Phyſician, in reaſoning on theſe ſubjects, had endeavoured to avail myſelf of the different organs of the human body, the *inſtruments* of all our actions or operations, both intellectual and corporeal, and had attributed agency of various kinds, not to the *perſon* having the organs, but to the brain, and nerves, and tongue, and ſtomach, and muſcles, and hands, and feet, as the author of the remarks, a Pneumatologiſt as it appears, has done with reſpect to the abſtract notions of the different *faculties* of the human mind, ſuch as, Underſtanding, Will, &c. he would certainly have thought my conduct unreaſonable and uncandid: As, for example, if I had maintained, that it was not the perſon, but his brains, that kept his ſtomach from being loaded with improper food, his feet from walking over a precipice, his hands from picking and ſtealing, his tongue from lying and ſlandering, when motives or temptations, and opportunities for ſuch *actions*, occurred; every body

body, I think, muſt regard ſuch a mode of reaſoning as mere evaſion and arrant trifling; yet it would be a kind of metaphor very near akin to the one under conſideration, and juſt as much to the purpoſe. We are not reaſoning about the conduct of men without brains, nor about men without underſtanding; but about men who have both, and who could neither judge nor act as they do without both; though neither their brains nor their underſtanding can act for them. And we are inquiring, whether they, even with the help of brains and of underſtanding, can act as we ſee them do, unleſs motives were ſeparable from their correſponding actions, and they *had the power*, that is, *were able*, to ſeparate them occaſionally.

But, diſregarding the full literal meaning of the metaphors employed, we may conſider what *muſt be ſuppoſed* the philoſophical meaning of ſuch expreſſions; as, for example, in the end of N° 8. and beginning of N° 9.

Influence is ambiguous: it may mean either a perſon's feeling the deſire or motive ſuppoſed, that is, having them applied, according to the *poſtulatum*; or the effect of ſuch motive, in choice and overt act. If it mean the former, it cannot be excluded by the underſtanding, or by any of its operations. It is implied in the very notion of motive or deſire. If it mean the latter, then to exclude the combination of influence (whether abſurd or not) in any caſe, is to ſeparate one or more of the motives applied from its proper action or ſuppoſed effect.—No action being performed according to a certain motive,—ſuch motive having no effect,—the influence of it being excluded,—the combination of its influence with that of one or more other motives being rendered impoſſible,—and its being ſeparated from its proper action,—are phraſes perfectly ſynonymous and convertible, as will appear from the caſes (*inſtantias particulares earumque ſeries et ordines*) of which they may be predicated indiſcriminately. It is indifferent for the purpoſes of good reaſoning,

reaſoning, and eſpecially of my *kind* of reaſoning, which of them be employed.

Even if we ſhould agree to ſpeak in metaphor, without neceſſity, on this ſubject of ſtrict reaſoning, we ſhould ſoon find, that on many occaſions the ſuppoſition of the underſtanding *excluding*, or *rendering impoſſible*, the influence of certain motives, is improper in this reſpect, that the *excluſion* or *ſeparation* which takes place is often not according to the judgement or deciſion of the underſtanding, but directly in oppoſition to it. In the caſe of a porter earning a guinea by going one way, and diſregarding half a guinea which he might have got by going a different way, both the *action* and the *excluſion* of influence are according to the underſtanding; but in the caſe of *Medea*, and all like it, both the *action* and the *excluſion* are againſt the underſtanding. It would be nearer the truth, though ſtill a very inaccurate mode of ſpeaking, to ſay, that in ſuch caſes the will excluded, or rendered impoſſible, the influence of certain motives on the perſon, or his un-

derſtanding, &c. than to attribute ſuch excluſion to the act of the underſtanding.

The author of the remarks muſt certainly have forgotten the important difference between what is ſtrictly ſpeaking *impoſſible*, and what is only repugnant to vulgar prejudices or common ſenſe, when he called ſuch a reſult as that of going in the diagonal, and not in either of the ſides of the parallelogram, in the caſe of the porter, (p. 226. referred to in N° 11.), *impoſſible*. No underſtanding or intelligence of the mind can render it *impoſſible*; like the being in two places, or the moving in two different lines at once.

The vulgar might with ſome reaſon call it abſurd and ridiculous, as being contrary to *their* notion of the relation of motive and action. But the author of the remarks, and all other Neceſſitarians, far from having any reaſon to think it *impoſſible*, are not even intitled to call it *abſurd* and *ridiculous*; for it correſponds perfectly to *their* notion, though not to the vulgar notion,

notion, of the nature and influence of motives: Nay more, it is a reſult *preciſely* of the ſame *kind* with that from two equal and oppoſite motives applied to the ſame perſon at once, and well illuſtrated by the ſuppoſed conduct of the hungry aſs between two bundles of hay; which all orthodox Neceſſitarians hold as faſt as any article of their creed. Both remaining inactive or at reſt, when under the influence of two equal and oppoſite motives, and moving in the diagonal in the caſe of the porter as ſtated by me, are ſo extravagantly inconſiſtent with the vulgar, proper, notion of the relation of motive and action, as to be ridiculous: both of them are perfectly conſiſtent with the notion of the abſolute irreſiſtible force of motives; both of them are neceſſarily implied in, or deducible from, the notion of conſtant conjunction; both of them are perfectly analogous to what is well known experimentally to take place in lifeleſs bodies under the influence of equal, oppoſite, or of combined cauſes of motion; both of them, I am well convinced, will be found falſe on trial; yet thoſe very philoſophers who (like Dr PRIESTLY

PRIESTLY in the paſſage already quoted, p. 545. and 546.) aſſert the one of them as a familiar and well-known matter of fact, and even as a ſelf-evident neceſſary truth, take great umbrage at the other, and reckon it a kind of inſult to their underſtanding; and call it impoſſible; nay, give it ſome very hard words, ſuch as abſurd and ridiculous, &c.; which I, as the diſcoverer of it, cannot fail to take very much amiſs. What, then, is the difference between the two caſes, in conſequence of which thoſe philoſophers ſo boldly aſſert the one, and ſo obſtinately deny the other, without even the ceremony of a trial? I ſolemnly declare, that I can conceive no reaſon but one, namely, that the latter may in a moment be decided by open unequivocal experiment, in ſuch a manner as to exclude all hypotheſes, and all appeals to conſciouſneſs with reſpect to the reaſon of its failure; while the former is of ſuch a nature, that, though in the firſt inſtance it may be brought to the teſt of experiment, yet it will admit of an arbitrary hypotheſis, involving an appeal to conſciouſneſs, to account

count for the reſult of the experiment being contrary to the doctrine aſſerted; which is always foreſeen and expected *a priori*.

With reſpect to the laſt ſentence of N° 9. I need only obſerve, that as I am not diſputing about *words*, but *things*, I care not whether the influence of motives be called "ſtrictly ſpeaking uniform," or not; but their "uniform influence," if it is to be called ſuch, appears plainly to be a very different kind of "uniform influence" from that of phyſical cauſes, when applied to lifeleſs bodies. And as to the former being "ſubject to very different laws" from the latter, it is a very allowable metaphorical expreſſion, denoting in general what I have been maintaining and demonſtrating particularly in my Eſſay. *Laws*, in ſuch inveſtigations as theſe, mean ultimate general facts: ſome of theſe laws, or facts, which are different in the two relations of cauſe and motive, I have aſcertained; eſpecially the occaſional ſeparation of the latter from its action, its conſtant reference to another concurrent

concurrent principle of change, which I have called a ſelf-governing power in the agent or ſubject, and the want of any ſuch concurrent principle of change in the lifeleſs ſubject of mere phyſical changes.

N° 10.

This remark may ſeem to deſerve peculiar attention, as it inſinuates a kind of appeal to obſervation and experiment, with reſpect to the uniformity of a perſon's *judgement* (which, in the language of the author of theſe remarks, means *choice*, or *voluntary determination*, followed by and ſhewn by overt action) in the ſame circumſtances.

Suppoſing, for the ſake of argument, what I cannot admit in point of fact, that mens *judgements* and overt actions would be found always the ſame in the ſame circumſtances, *no* juſt inference of *neceſſary* conſequence with reſpect to the queſtion at iſſue could be drawn from it.

The

The perſon may have acted, in affairs of importance, according to motives of duty, or of intereſt, or of pleaſure, either applied ſingly, or in all varieties of combination and oppoſition; and on trifling occaſions, he may have acted without much attention or exerciſe of the ſelf-governing power, from inſtinct, or from habit, or from the firſt thought that occurred to him in that involuntary train which is always, or almoſt always, going on. I ſee no reaſon to expect, in general, that a perſon's conduct in the *ſame* circumſtances ſhould be different at different times. To ſuppoſe or expect, that a perſon having a ſelf-governing power ſhould do his duty, or conſult his intereſt, or follow his pleaſures, at one time, and at another time, in the ſame circumſtances, ſhould diſregard duty, intereſt, pleaſure, &c. is to confound the notion of ſelf-governing power with the improper and fantaſtical uſe of it, and with the *want* of any uniform relation between motives and actions; which is uncandid, as well as unreaſonable, as is fully ſtated in SECT. I. p. 4. 5. 6. This, however, the author of

the remarks has not attended to, as appears by the ſecond ſentence of N° 16. My mode of reaſoning is independent of the reſult of ſuch obſervations and experiments as we are now conſidering; for it ſhews, that the actions of men *could not be* in ordinary caſes what we really find them, whether more or leſs uniform, without the concurrence of a principle of change different from what appears to have any ſhare in the changes or effects obſerved in lifeleſs bodies.

The reference to the *ſuppoſed* uniformity of mens *judgements* and actions in circumſtances *ſuppoſed* the ſame, is in another reſpect fallacious and nugatory: for let the reſult of any obſervation or experiment be what it will, or what it can be, I mean in favour of the uniformity alledged, or againſt it, ſtill room is left for hypotheſes to explain it away; and theſe hypotheſes are endleſs, as well as uſeleſs; for they require appeals to conſciouſneſs.

If the reſult be the ſame at the ſubſequent

quent trials as at the firſt, it will be held as clear proof of the doctrine aſſerted; if it be different, it will be immediately ſuppoſed and aſſerted, that the circumſtances, though ſeemingly the ſame, were really different; that ſome new motive, perhaps not diſcoverable by the obſervers, the conductors of the experiments, had occurred, and produced the variety in the reſult. According to MR HUME, "the fantaſtical deſire of ſhewing liberty" muſt be reckoned the new motive in ſuch a caſe. This arbitrary hypotheſis is juſt as unreaſonable as the converſe of it would be; I mean, as it would be to aſſume the ſuppoſition of the interference of a new motive, though unknown to us, in thoſe caſes where the reſult, on repeated trials, was the ſame as on the firſt; and thence to argue, that there muſt be a ſelf-governing power in the perſon to prevent the effects or influence of certain motives, (that is, to ſeparate them from their proper actions), ſo as to make the reſult, in action, the ſame, while the circumſtances, in point of motives, were very different. The two caſes, of different actions in the

ſame circumſtances, and of the ſame actions in different circumſtances, are ſtrictly correlative; both ſuppoſitions are equally eaſily made, and both are nugatory, as requiring appeals to conſciouſneſs, and conſequently being ſubject to arbitrary aſſertion and denial. But were it not for this laſt circumſtance, that is, could they both be aſcertained beyond doubt or diſpute, they would afford the means of ſettling *demonſtrably* the ultimate philoſophical queſtion at iſſue; which the mere uniformity of reſult in action, from circumſtances *really* the ſame in point of motive, could *never* do.

It is at leaſt a conceivable caſe, that a perſon having a ſubſtantial motive for acting in the way he had done before, may feel a deſire (fantaſtical or rational) to ſhew his liberty, and may think this can be beſt ſhewn, or ſhewn only, by acting differently from what he had done before. The philoſophical queſtion, then, comes to be, *not*, Whether he will act or not act as he did before? but, How will he

he be able to act according to the old or according to the new motive? What is the nature of the influence of motives? What are the general laws or facts with reſpect to it? What is the relation, not merely of the motive according to which he acts, but of both the motives, and of every motive that he feels, to his voluntary determination and action? Is it a conſtant conjunction? Is it a ſeparable one? Is the ſeparation by chance, or by a certain law? Is there any abſolute force or influence of motive, ſo as to exclude ſelf-governing power?——In ſhort, the whole reaſoning of my Eſſay applies ſtrictly to the hypotheſis ariſing out of the *alledged* uniformity, and real or apparent difference of actions in the ſame circumſtances, and the very *certain* ſameneſs of actions in different circumſtances. But I think it better to avoid ſuch hypothetical and diſputable motives as that ſuppoſed fantaſtical deſire of ſhewing liberty, and take ſuch as may eaſily be applied, and may be certainly known, ſuch as the offer of money to a porter, on condition

tion of his doing any ordinary piece of work.

N° 10. line 22. "We cannot trace back the route of the die in a dice-box," &c. Why the route of a die in a dice-box, rather than that of a ray of light in a glaſs priſm, or in a teleſcope, or of a projectile through the air, or of a ſhip ſailing in a current? Is it that ſome philoſophers love darkneſs rather than light, becauſe it favours their ſyſtem more? I ſuſpect ſo very ſtrongly; for I cannot think any writer, whether able or not, would ever have had recourſe to ſo complicated a caſe, and one ſo much out of our ſight, and out of our knowledge, and out of our power, as the motion of a die in a dice-box, if his object had been only the inveſtigation of truth, and a fair illuſtration of what takes place between the application of motives and the voluntary overt actions of mankind.

But though it is impoſſible either to foreſee or to trace back, in any *one inſtance*, the exact route of a die in a dice-box; yet it

it is eaſy to analyſe and to ſpecify the various cauſes of its route, and its final ſettling on the table, ſo as to ſhew, that there is an infinite difference between the motion and ſettling of a die and the voluntary actions of men, and eſpecially to ſhew, that there is no evidence, not even the ſlighteſt preſumption, of there being any ſelf-governing power in the die, as there ſeems to be in a living perſon. For though the ſhaking a die in a box, and throwing it on a table, be fairly referable to one *Agent*; and may be thought a very ſimple as well as eaſy *action*; yet when we conſider *phyſically* the motion and ſubſequent ſettling of the die as *effects* referable to *cauſes*, we find that they are by no means ſimple. Many different *phyſical cauſes*, and even different *kinds* of ſuch *cauſes*, contribute to the various motions of the die; ſuch as, impulſe from the bottom or from the ſides of the box, and from the table, modified too by the elaſticity of all of them, in various degrees; gravitation, or the weight of the die, always the ſame, and having always equal effect, whether the die be at reſt or

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in motion, and whether the direction of its motion be upwards or downwards, perpendicular, parallel, or oblique to the horizon; reſiſtance from the air, and from the bottom and ſides of the box, and from the table, (though indeed theſe *reſiſtances* are only *impulſes*, conſidered in a different point of view). Then the direction of the impulſe, with reſpect to the centre of gravity of the die, muſt be conſidered: if it be in a line paſſing through the centre of gravity of the die, the motion of the die will be ſimply progreſſive; but if the impulſe be not in ſuch a line, there will take place in the die both a rotatory motion round its centre of gravity, and a progreſſive one in the direction of the impulſe.

It is unneceſſary here to conſider more minutely, either the number, the nature, or the proportions, of the various phyſical cauſes of the motion of the die, as accuracy on that point is neither our preſent object, nor perhaps in itſelf attainable. On throwing a die in the common way, from a dice-box on a table, which may

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be done in a *ſecond* of time, or leſs, all thoſe phyſical cauſes are applied to it, either ſimultaneouſly or in ſucceſſion, and either in *concurrence*, *oppoſition*, or *combination*, (+, —, ⌐): but the particular circumſtances of the application of them, as to quantity, time, proportion, and other relations, are unknown to us, and out of our power; and therefore, with reſpect to us, are as if they were not; but it cannot be believed, that any perſon of competent knowledge and judgement ſhould ever ſuppoſe, that any one of thoſe cauſes is ſeparated from its effect. If any perſon were to entertain ſuch an extravagant opinion, he might (if he were candid in his profeſſions and reaſonings) be eaſily convinced of his error, by trying ſeparately that ſtep of the proceſs in which he ſuppoſed ſuch a ſeparation to take place.

We know, in general, with reſpect to the route of the die, that from being at reſt it will be in motion, variouſly modified in kind, in direction, and in velocity, and at laſt will be at reſt again. But from the *ſhape* of the die, it is phyſically

impoſſible that it ſhould reſt in any other but one of ſix poſitions; that is, if it be thrown on a hard table; for if it were thrown on a very ſoft ſurface, or on looſe ſand, it might reſt on one of the twelve lines or of the eight points that bound it, and in an endleſs variety of directions. If the die is *fair*, (not loaded), there is no *cauſe*, and no *power* in itſelf, to make one of its ſix ſurfaces turn up, rather than another; but one of them *muſt* turn up: it is an equal chance which of them, and five to one againſt any one ſide that can be ſpecified. The particular ſeries of *cauſes*, either ſimultaneous or ſucceſſive, concurring, oppoſing, or combined, that terminate in the ultimate effect, which alone we ſee, being unknown to us and out of our power, the ultimate effect may fairly, and without danger of error, be regarded by us, with a view to conjecture, or betting, or calculation, as a mere matter of chance; that is, as coming to paſs without any cauſe at all. The doctrine of chances is ſtrictly applicable to it, and the concluſions deduced from that principle are found experimentally true with reſpect to a die,

or

of any number of dice: but they are falſe and ridiculous, and repugnant to the natural, univerſal, and indefeaſible notion of motive, when applied to the voluntary actions of men; as hath been fully ſhewn already, in SECT. XVI: the concluſion is obvious, and need not be here repeated.

N° 11.

" The *total want of analogy* between the influence of our appetites upon the judgement and of forces in phyſics, appears," &c.

This is a ſtrange aſſertion; and a miſtake. The analogy between the relation of motive and action and that of cauſe and effect in phyſics, (comprehending appetites under the *genus* Motive, forces under the *genus* Cauſe), is great, and obvious, and generally acknowledged, and not to be denied without extravagance; and it has been fully ſhewn and illuſtrated in my Eſſay. It uſed to be thought ſo per-

fect as almoſt to amount to *identity*: this was the doctrine of all modern Neceſſitarians, eſpecially of MR HUME and DR PRIESTLY; and the very object of my Eſſay was to ſhew, that the two relations were not the ſame, to ſpecify wherein the analogy between them failed, (namely, with reſpect to the conſtancy or ſeparability of the conjunction), and to draw certain concluſions from the differences aſcertained between them.——The doctrine of the *total want of analogy* between them was quite unexpected, and is ſtill incomprehenſible to me. But ſuppoſing it right, that is, ſuppoſing the two relations in queſtion to be ſo completely different and unlike, that not only they are not the ſame, but that they do not even reſemble one another, in any, the ſmalleſt, particular, this cannot reaſonably preclude the inquiry into the principal differences between them; nor can it in the leaſt invalidate any concluſions neceſſarily reſulting from the differences obſerved. —— The want of combination in the reſult, from the application of different motives, in many caſes, as already fully explained, is complete

complete proof of a ſeparation of one of them from its proper effect or action; and, in truth, the phraſe in queſtion is little elſe than another expreſſion for the ſame notion, ſo eſſential to my reaſonings, and to all reaſonings, on this ſubject.

" The ſufficiency of the underſtanding for this operation," &c. (p. 477. line 26.) Admitting the ſufficiency of the underſtanding for *perceiving* and *judging* " to be the natural reſult of its intelligence," though I think the expreſſion a perfectly unmeaning pleonaſm, and allowing the metaphors employed in the remark to paſs unqueſtioned, I muſt obſerve, that ſuch a phraſe as " influence of phyſical force," and all the words and phraſes that can be contrived, will make no difference as to my argument, which is independent of words, and turns on the ſelf-evident and the demonſtrable neceſſary conſequences of a certain relation ≡, and on the truth or falſity of theſe neceſſary conſequences, as matters of fact, in different caſes of the application of motives and of phyſical cauſes:

cauſes: it is perfectly equal to me, whether X and Y be phyſical or metaphyſical forces, that is, cauſes or motives, and whether A and B be effects or actions: I find out by the reſult, whether the relation in queſtion be a conſtant or an occaſional and ſeparable conjunction, and whether there be in the ſubject, whether a living perſon or a lifeleſs body, any capacity or faculty of ſeparating X from A, or Y from B: ſuch a faculty is juſt what I call a ſelf-governing power.

I admit, that a perſon having underſtanding without ſelf-governing power, would, in numberleſs inſtances, as in the caſe of my porter, "judge one purſuit eligible, without abſurdly combining it with the other;" juſt as I firmly believe, that many a perſon ill of the palſy would judge it eligible to take up his bed and walk. But a man in a palſy *cannot* do what he thinks eligible; as little could a man, whatever might be the degree or kind of his underſtanding or intelligence, prevent the combination, oppoſition, and concurrence, (however abſurd theſe might often

often be), of the effects or influence of different motives; unleſs, in the firſt place, theſe were ſeparable from their actions; and unleſs, in the ſecond place, he had the power of ſeparating them. —— To this I alluded in p. 232. 233.: for though my argument is independent of all conſiderations with reſpect to the ſteps, ſuch as judgement, choice, will, &c. &c. between the motive and the overt act, and though I anxiouſly wiſhed to avoid ſuch diſcuſſions, in hopes of avoiding all idle verbal diſputes, and of having no appeals to make but to open experiment; yet I knew perfectly, that my argument, founded on the notions ≡, +, —, ⌐, would apply equally well to every ſtep of the proceſs; but that, whether it did or not, or whether that was conſidered or not, it would apply completely to the firſt and the laſt; the motive and the action, the cauſe and the effect.

If any Pneumatologiſt ſhould not at once perceive and underſtand the infinite difference between *judging it eligible to prevent* the effect (in abſurd or improper combination

bination or otherwiſe) of any cauſe, and the *actually preventing* ſuch effect, that is, ſeparating the one from the other, let him fairly try a few ſuch experiments as the following: Let him walk out at his window, or try to walk over a deep and rapid river on the ſurface of the water, or try to leap over a broad and dirty ditch; or, if theſe experiments be thought too dangerous to life or limb, let him ſwallow half a drachm of ipecacuanha, or half a drachm of jallap; or, if he diſlike drugs, let him drink, inſtead of tea, to his breakfaſt, a pint, or more if needed, of the beſt French brandy; and let him candidly mark the reſult:—I take it for granted, that his underſtanding would judge (or enable him to judge) it eligible not to yield to the law of gravitation, not to fall to the ground with an accelerated velocity, not to fall into the ditch, not to ſink to the bottom of the river, not to be carried down the ſtream of it, not to experience the unpleaſant effects of the drugs, and not to become drunk with the brandy; yet I ſcarce think even a Metaphyſician can be found, who will expect that

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the judgement of his underſtanding will avail aught in preventing thoſe effects; or who will not ſee that ſuch preventing of the effects is juſt what I have been reaſoning about, and have been expreſſing by the phraſes ſeparating a cauſe from its effect, &c. and that to enable a man to make ſuch experiments with ſafety, as well as uniformity of the reſult, it would be neceſſary, not only that the cauſes alluded to ſhould be ſeparable from their effects, but alſo that *he* ſhould have the power of ſeparating them. Now, ſuch ſeparability of motives and actions, and ſuch power in the agents, appear in the ordinary conduct of mankind, but not in the phænomena of phyſics, where the ſubject is lifeleſs body.

N° 12.

This paragraph deſerves particular attention: for though it appear only as a remark or objection relating to a ſingle ſentence of my Eſſay, which ſentence is fairly quoted, yet it is really an indirect

and feeble attempt to deny one of my axioms, $X + Y \equiv A + B$, or, as it might be expreſſed in many caſes, $m X \equiv m A$. I call the attempt feeble and indirect, becauſe the axiom is not quoted and openly denied, but only a particular caſe, referable to that axiom, is mentioned, and certain inſtances of phyſical phænomena are ſpecified, which the author of the remark *thinks* contradictory to what I have ſtated as neceſſarily true in that caſe, as comprehended under the general axiom.

From this it appears, that he was not ſufficiently aware of the nature of an axiom, or ſelf-evident neceſſary truth; and particularly, that he did not attend to the relation between a *neceſſary* and a *contingent* truth, or what is *ſuppoſed* to be one; and conſequently that he hath not fully underſtood the complete evidence and ſupreme authority of demonſtrative reaſoning, as diſtinguiſhed from inductive, and from the evidence of perception and of teſtimony. But this certainly may be explained to him, or to any perſon: ſuch an attempt I made in SECT. III. to which

I ſhall now add a few remarks and illuſtrations relating to the point at preſent under conſideration; which I own I did not think of as even a poſſible matter of diſpute at the time when SECT. III. was written.

Particular inſtances, in contradiction to a *ſuppoſed* general or univerſal fact or law of nature, muſt be admitted as exceptions and limitations to that law: they may even be found ſo numerous, and ſo general, as to ſet aſide ſuch a ſuppoſed law, and to convince us, that our belief of it was either wholly or partly erroneous. The general notion, and the belief of any ſuppoſed principle or law of nature, being deduced from particular obſervations by a certain proceſs of thought or reaſoning which we call induction, can never be of higher authority than the particular facts from which it is derived, or than other facts equally well aſcertained. Nay, as that very proceſs of reaſoning or induction may be ſuppoſed imperfect or erroneous, the general inference from it *may be* fallacious; and *muſt be* of rather leſs

authority or evidence than the particular facts on which it was founded.

But the caſe is widely different with reſpect to axioms, or ſelf-evident neceſſary truths. Theſe are equally independent of all particular obſervations, and of all induction from them. They can neither be diſcovered, nor eſtabliſhed, nor ſhaken, nor confirmed, nor made more particular and limited, nor made more general and comprehenſive, by ſuch means. They contain in themſelves the evidence of their own truth, which evidence is ſimple, direct, and *ſupreme*. In order to our being fully convinced that they are univerſally and neceſſarily true, nothing more is requiſite but that we underſtand them. As there may often be ſome difficulty in this reſpect with regard to ſuch *abſtract* notions as thoſe which alone can be proper ſubjects of thoſe propoſitions which we call axioms, we may be aſſiſted in apprehending and underſtanding them, and conſequently be enabled to perceive their internal evidence, by proper *illuſtrations*, taken from real ſubſtances, correſponding in

in one reſpect, or more than one, to the notions on which the axioms are founded.

Thus, in teaching geometry, it is always poſſible, and ſometimes may be neceſſary, to illuſtrate the axiom, "That things equal to one thing are equal to one another," by ſhewing the learner various examples of the meaning and of the truth of it, in lines, ſurfaces, ſolids, circles, triangles, &c. But it would be a great miſtake, and a great fault in the teacher, to repreſent thoſe examples as proving the axiom, or the truth and the univerſality of it as depending on and limited by the reſult of the obſervations in particular inſtances, and the axiom as being made more or leſs general, according to the number and the extent of the particular obſervations that were made and conſidered: for this would imply, that the axiom might not be true at all times, and in all caſes; and that whenever caſes occurred wherein the reſult, on obſervation and trial, did not correſpond to the axiom, theſe were

to

to be acknowledged as exceptions to it. But this, if not, ſtrictly ſpeaking, abſurd, is at leaſt repugnant to the notion of *axiom:* for every perſon who knows what an axiom is, would inſtantly judge, that there was ſome defect or miſtake in the ſuppoſed obſervation, not that there was any error in the axiom, or any poſſibility of there being an exception to it. Thus, for example, if a perſon, on the faith of the axiom alluded to, ſhould ſuppoſe that all quart-bottles muſt be equal to one another, and on comparing many ſuch by actual experiment, and finding that they were not equal to one another, ſhould aſſert that the axiom was falſe, or at leaſt ſubject to exceptions, and in particular that it was not applicable to quart-bottles, it would inſtantly be diſcovered where his error lay; namely, in ſuppoſing that all the things commonly called quart-bottles were ſeverally equal to one thing: and it might reaſonably be ſuſpected, that he did not know what an axiom was, that he did not underſtand the nature and ſupreme authority of neceſſary truths, and

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the advantages of reaſoning by neceſſary conſequences.

Now, to apply theſe remarks to the caſe in queſtion, the objection to my argument founded on the ſuppoſed obſervation of certain examples in contradiction to one of my axioms, or to a caſe plainly comprehended under it, I have only to obſerve, that, ſenſible how abſtruſe, and in one reſpect how new, the notion of conſtant conjunction is, on which my axioms depend, or in which they are implied, I took care to explain and illuſtrate both it and them, very fully, perhaps tediouſly; but merely in order to make them be underſtood, that their own internal evidence might be perceived; not as conceiving, that thoſe examples and illuſtrations could prove, or that any others could refute or limit the axioms.

The illuſtrations were taken from certain phyſical cauſes and their effects; and as the reſult in various examples correſponded perfectly to the axioms, ſomething

thing more than the illuſtration which I wanted was obtained, and ſomething highly important; I mean a proof, not indeed, ſtrictly ſpeaking, concluſive, but affording a probability approaching very near to certainty, that the circumſtance of conſtant conjunction was a part of the relation of *thoſe* cauſes to their effects: juſt as the reſult, when quantities ſeverally equal to one quantity are compared experimentally, by its correſpondence with the firſt axiom of geometry, ſerves to prove, not the axiom itſelf, but the juſtneſs of the notion of quantity, and its applicability to real ſubſtances, and the truth of the ſuppoſition of the relation of equality ſubſiſting between each of thoſe quantities ſeverally and one other quantity.

According to my mode of reaſoning, the *correſpondence* of the reſult in many caſes of phyſical cauſes and effects to my axioms, whatever it may prove with reſpect to this relation, has no more pretenſions to prove or confirm the axioms implied in the notion of conſtant conjunction,

junction, than the *inconſiſtency* of the reſult, in many caſes of motives and actions, with my axioms, has to refute them. This inconſiſtency only proves, that the circumſtance of conſtant conjunction is no part of the relation of motive and action. This was preciſely the uſe that I made of it; and it was all that I wanted for the firſt part of my dilemma. I ſhall at all times admit the ſame inference as to the want of conſtant conjunction between any things called cauſes and their effects, with reſpect to which the reſult in the ſeveral caſes does not correſpond to my axioms. ——The caſe is exactly parallel to that of the quart-bottles, already ſtated: Give us any number of quart-bottles ſeverally equal to one, and they *muſt be* equal to one another; give us any number of ſuch bottles not equal to one another, and they *muſt not be* ſeverally equal to one: The axiom will ſtill remain unſhaken. So give us cauſes conſtantly conjoined with their effects, and the reſult from the application of them *muſt be* what is expreſſed in the axioms; give us cauſes the reſult of whoſe application does not correſpond to the

axioms, and they *muſt not be* conſtantly conjoined with their effects; give us a number of inſtances of the application of cauſes, in all of which the reſult correſponds with the axioms, and we ſhall admit, that, in all of them, the ſeveral cauſes *are* conjoined with their reſpective effects; and we might infer by induction, with ſome *probability*, that this was the caſe with reſpect to all kinds of cauſes, until we met with inſtances to the contrary, in the application of ſome particular kinds of them; and then ſuch inſtances would be acknowledged as exceptions to the ſuppoſed general rule with reſpect to cauſes; as, for example, with reſpect to agents, motives, evidence, the vital principle, and the partial exciting cauſes in the phyſiology and pathology of animal and vegetable life.——But whatever be the relation between theſe *cauſes*, or any others, and their reſpective effects, as to conſtant or occaſional and ſeparable conjunction, the axioms derived from this notion *muſt* remain unſhaken, as neceſſary truths; and *muſt* be found true, as matters of fact, in the various applications of every *kind* of

cauſe

cauſe that is conſtantly conjoined with its effect.

As to the three inſtances ſtated in N°12. as examples contradictory to my remark in p. 291. 292. which is fairly quoted in N° 12. and which I ſtill think juſt in every part, and the firſt part of which is clearly implied in one of the axioms, as the laſt is in the Doctrine of Chances, it is nowiſe ſurpriſing, that in none of them is the effect the meaſure of that "*circumſtance which is in one ſenſe its cauſe:*" For, in the firſt place, in none of them is that *circumſtance* conſtantly conjoined with the ultimate effect, as the author of the remark has very raſhly aſſerted; and, in the ſecond place, in the two laſt of them, (which are of a very different kind from the firſt), other principles of change, or cauſes, beſides that *circumſtance which is in one ſenſe the cauſe* of the phænomenon mentioned, concur, and are indeed abſolutely neceſſary for the production of it. Even with reſpect to the firſt of them, the exploſion of a mine of gunpowder, ſome other *circumſtances*, beſides the heat ap-

plied, are neceſſary for the production of the effect; for example, air: if the powder were thoroughly wet, by the mine being filled with water, it would not explode in the uſual manner on the application of heat.

But, independently of this conſideration of a *different kind* of cauſe, beſides the heat, being requiſite for the production of the effect uſually referred to the heat alone, which conſideration may be diſregarded at preſent, as that other cauſe, as well as the heat, may be ſuppoſed equally applied in all caſes, while the ultimate reſult, though the ſame in kind, is widely different in degree in different caſes, and by no means a meaſure of either of the original external cauſes applied, it muſt be obſerved, that in "the exploſion of a mine of gunpowder," there is a great concurrence, and a very *long ſeries* of cauſes and effects, of the ſame kind with that firſt applied. I call the *ſeries* of cauſes *long*, in conſideration of the great number of ſteps in it, however *ſhort* it may be in point of time. By the inaccuracy

curacy of the expreſſion employed by the author of the remark, all that vaſt concurrence and that long ſeries of innumerable little effects are repreſented as but one great effect, referable to the heat applied as its cauſe: and perhaps, from want of due attention on his part, he may have come to regard it in that improper light; for I cannot ſuppoſe him unacquainted with the generally known facts relating to the compoſition, the inflammation, and the deflagration of gunpowder.

"A mine of gunpowder" is a conciſe, but inaccurate expreſſion, employed to denote the quantity of gunpowder lodged in a mine. This quantity may be 100 barrels, that is, 10,000 lb. containing ſeveral hundred millions of grains or particles, each of which has in itſelf a due proportion of nitre, of ſulphur, and of charcoal. "The exploſion of a mine of gunpowder," means the inflammation and deflagration of every particle of the gunpowder. This may be produced or begun in one particle, or a few particles, by the application

application of a certain *degree* of heat, however ſmall the *quantity* of it may be, which will kindle the ſulphur or charcoal, or perhaps melt the nitre and ſulphur, without kindling directly the latter and the charcoal. By the chemical affinities of the component parts of the gunpowder, as ſoon as ſuch kindling and melting of any the ſmalleſt particle takes place, a rapid and violent decompoſition of it, attended with the extrication or generation of much air, and very intenſe heat, is produced: this is called the deflagration, detonation, or exploſion of the gunpowder. The heat thus produced has the ſame effect on the particles in contact, or nearly ſo, with the one firſt kindled: on the ſame principle, this proceſs will go on ſucceſſively through all the particles of the powder, but with ſuch velocity, that the whole quantity of it may explode in one or two *ſeconds*; and this, which is the ſum or amount of millions of little effects, either ſimultaneous or in very rapid ſucceſſion, will *appear* as only one great effect produced in a moment by one ſingle cauſe, perhaps very ſmall in quantity,

quantity, and bearing no proportion, at any time, to the ultimate effect; which is alſo various at different times, according to the quantity of the powder exploded; that is, according to the number of little effects of which it is the aggregate amount. But, accurately conſidered, the ultimate effect in this caſe is no more to be regarded as the effect and meaſure of the ſuppoſed cauſe, than the great fire of London, which raged for many days, and conſumed a great part of the city, could be reckoned the effect of the ſmall quantity of heat, perhaps a ſingle ſpark, which began it. The difference between the two caſes is merely as to the velocity of the ſeries of effects produced: but whether this ſeries occupy only a few ſeconds, or many days, or many years; whether the many little effects coincide, or come ſo near one another, in time, as to form one great aggregate, which is the caſe in the exploſion of gunpowder, or the burning of a houſe; or come ſo ſlowly as to be ſeen only in ſucceſſion, which is the caſe in the burning of ſlow-match; it is *equally* different from

from the ſimple immediate effect of a cauſe conſtantly conjoined with its effect, and *equally* unfit to be a meaſure of ſuch a cauſe.

If the author of the remark, or any other perſon, wiſh to find in the exploſion of gunpowder the conſtant conjunction of cauſe and effect, (in my ſtrict and uniform meaning of the phraſe), and an effect, conſequently, which is a meaſure of the cauſe applied, he muſt look for it in the ſtep between the application of heat and the kindling or melting of the ingredients, and in the ſtep between this and the detonation of the compound; and, making due allowance for the peculiar chemical principles of change, conſiſting in the relations among different bodies, ſimple and compound, and among the particles of the ſame body, however ſimple it may be, which principles of change ſeem to have a ſhare, as well as heat, in producing ſuch effects as we are conſidering, he will find in theſe ſteps what he wants. But he muſt obſerve, that the firſt

of

of them depends, not on the *quantity* of heat thrown into the whole maſs of powder, but on the raiſing the *temperature* of ſome part of it to a certain degree; we ſhall ſuppoſe (for I know not exactly the fact) to 600°. A vaſt *quantity* of heat may be thrown into gunpowder, enough, for example, to raiſe the temperature of a great maſs of it 200° or 300°, if equally diffuſed over it all, without kindling or melting the ſmalleſt particle of it. While a wonderfully ſmall *quantity* of heat, as, for example, what is contained in a red-hot ſpark ſtruck off with a flint from ſteel, will melt or kindle that little particle to which it is applied; which particle will then immediately explode. Nor will it be thought by any chemiſt a paradox to ſay, that the heat in ſuch a ſpark is as truly conſumed, or abſorbed, in heating, melting, or kindling the gunpowder, and conſequently is as truly meaſured by the quantity of its effect in thoſe ways, as if it had been employed in making water boil or ice melt. Yet the *quantity* of heat in ſuch a red-hot ſpark of ſteel may be ſo very ſmall, that, if it had been equally diffuſed

through the whole maſs of gunpowder, it would not have raiſed its temperature the thouſandth part of a degree. If a much greater quantity of heat, as, for example, that contained in many large maſſes of iron of a white heat, be applied to the gunpowder, the immediate effect of it will correſpond to the quantity of it, or be a meaſure of it; that is, more of the powder will be kindled or melted directly by it; but as ſoon as this effect begins, the deflagration begins, and is rapidly propagated through the whole maſs; the exploſion of which will take place in ſomewhat leſs time, and conſequently with ſomewhat more violence, than if it had been produced by only one ſmall ſpark. But the difference of the two exploſions, in point of time, will probably not exceed a very ſmall fraction of a *ſecond*; and the difference between them, in point of violence or force, will be proportionably ſmall, ſo as to bear no ſenſible proportion to the whole force of the exploſion in either caſe: and conſequently both thoſe differences will eſcape

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our obſervation, or be to us as if they were not.

The other two inſtances ſtated in N°12. as contradictory to my remark, may be diſcuſſed very ſhortly.

" The malignity of the ſmall-pox is no meaſure of the quantity or quality of the contagious matter employed to give the diſeaſe."

It certainly is not; nor can it be ſo, for three moſt excellent reaſons: Firſt, Becauſe any given quantity of the contagious matter of any given quality is not conſtantly conjoined with any determined degree or malignity of the diſeaſe, that is, with any certain number or kind of puſtules, and with any certain degree, or number, or combination, of the febrile and other ſymptoms; ſecondly, Becauſe at leaſt one other cauſe, of a different *kind* from the contagious matter, and admitting of great varieties as to its own condition, *muſt* concur with it to produce the diſeaſe, in any degree; and, thirdly, Be-

cauſe in moſt caſes ſeveral other cauſes *do in fact* concur with the two primary cauſes, and have a great influence in modifying the diſeaſe.

The vital principle is as neceſſary for the production of the ſmall-pox, as the application of the exciting cauſe, contagion; nay, a particular ſtate or condition of the vital principle is requiſite for the production of the diſeaſe. The contagion, if applied to an animal of a different ſpecies from man, as, for example, to a bird or a fiſh, or to a man who had had it before, or to one who, from peculiarity of conſtitution, was incapable of having the diſeaſe, or even to one who was not, at the time when it was applied, properly *diſpoſed* to take it, would no more produce the ſmall-pox, than it would do if it were applied to a ſtock or a ſtone.

Even when the proper condition of the vital principle concurs with the contagion, and the diſeaſe accordingly is produced, it is greatly modified, as to malignity, by ſuch concurrent cauſes as the ſtate

ſtate of the body with reſpect to fulneſs of blood, and tendency to inflammation, general or particular, and perhaps to putrefaction, or at leaſt to debility; and perhaps ſtill more by external cauſes of a different kind, ſuch as heat or cold, bad air or good, proper or improper diet and medicines. According to the various management of theſe concurrent cauſes, many of which are very much in our power, the ſmall-pox may be made either ſo mild as ſcarce to be known, or thought a diſeaſe, or ſo malignant as to be generally fatal.

" The contraction of a muſcle is no meaſure of the ſtimulus applied to produce it."

Certainly not; for nearly the ſame reaſons that make it impoſſible that the malignity of the ſmall-pox ſhould be a meaſure of the contagion applied.

The ſtimulus that occaſionally excites contraction in a muſcle, is not conſtantly conjoined with any uniform degree or force

force of contraction in it; nay, not even with any contraction at all in the muſcle. It is only a partial exciting phyſiological cauſe, which can have no effect without the concurrence of the vital principle; and as this principle admits of many different modifications, the ultimate effect obſerved from the application of a ſtimulus may often be various in quantity, and perhaps in quality too, when the ſtimulus is the ſame; or may be the ſame in both reſpects, when the ſtimulus is very different in both. A ſtimulus applied to a muſcle perfectly dead, that is, completely deprived of its vital principle, will produce no contraction in it: a weak ſtimulus applied to muſcles of great and peculiar irritability, (which is a particular modification of the vital principle), will produce unuſually ſtrong, and perhaps irregular, contraction of ſuch muſcles: a ſtrong ſtimulus applied to muſcles that are weak, or torpid, or paralytic, will produce weak contraction, or perhaps none at all.

After thus conſidering *phyſically*, and at

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ſo great length, the three inſtances given as contradictory to my remark founded on one of the axioms of conſtant conjunction, in order to ſhew that they are not inconſiſtent with the common, and what appears to me the juſt, notion of the relation of ſuch cauſes and their effects, I hope I may, without any danger of being thought either obſcure, or deſirous to evade the moſt rigorous and particular inveſtigation of the caſes ſtated in N° 12. give what I think the fair and complete *logical* and *mathematical* anſwer to thoſe caſes, and to all of the ſame kind; which is indeed a very ſhort one. If X be ſometimes conjoined with A, ſometimes with *m* A, ſometimes with $\frac{A}{m}$, it is not *conſtantly conjoined* with any one of them; nor conſequently can any one of them be a meaſure of it.

" Human actions do not admit of degrees," &c. *Vide ſis* page 271. line 20. to page 276. line 21.

" I think the involuntary opinion of the underſtanding

underſtanding *always* has its full effect on the will."

This very erroneous aſſertion, for it can ſcarce be reckoned a real *opinion*, proceeds from confounding the two very different notions of will or choice, and opinion or judgement, properly ſo called; which confuſion again proceeds from uſing the terms, *Underſtanding*, *Judgement*, *Opinion*, to expreſs the two different notions in queſtion. This appears clearly in conſidering ſuch caſes as that of *Medea*, page 572.; and has been fully diſcuſſed already, page 551. line 8. to page 576. line 17.

N° 13.

"I could have wiſhed," &c. *Vide ſis* page 465. line 20.

"The terms *Option* and *Diſcretion*, which are *attributed* to this *power* when *acting*," &c.

I never meant to attribute *option* or *diſcretion* to *power;* nor did I ever conceive that *power acted.* Power and action, (in the ſtrict and literal meaning of theſe terms), as well as option and diſcretion, are attributes of *mind* alone. By optional or diſcretionary power, I meant power which the mind, or living perſon, might or might not exert on any occaſion, according to the option, diſcretion, or choice of ſuch mind or living perſon. This *kind of power* alone, I conceive to be properly and literally power: The power (as it is called) of heat to melt ice, of water to diſſolve ſalt, of brandy to make men drunk, &c. is plainly a very different kind of *thing*; which I conceive to be called power by a metaphorical uſe of this term. The purpoſe of the epithets *optional* and *diſcretionary*, ſo often applied to it, was to prevent ambiguity, by ſhewing plainly what kind of power I meant. But I have no attachment to the phraſe, which, though perfectly intelligible, is evidently illogical; like the common phraſes, a wiſe plan, a fooliſh project, a happy choice, a miſerable life, an eloquent ſpeech, &c. in

which that wiſdom, or folly, or happineſs, or miſery, is *verbally* predicated of the plan, the choice, the life, &c. of a perſon, which is meant, and, in ſtrict logical propriety, is predicable, only of the perſon.——The remarks on the notion of power (page 147. to 153.) were intended to prevent ſuch objections as theſe in N° 13.

" One ſhould be apt to think, from ſome of theſe terms, that it was a faculty which decided according to reaſon and argument."

That would be a miſtake of a very odd kind; for *it* can no more *decide* than it can eat, and drink, and walk, and ride; and it can neither hear, nor ſee, nor underſtand reaſon and argument. The ſimple word *power*, and the phraſe *optional* and *diſcretionary power*, expreſs merely the abſtract notion of a perſon being able, at his own option, to act or not to act; that is, they expreſs that notion, ſingly, without regard to numberleſs other attributes of a perſon; juſt as the word *whiteneſs* expreſſes one

one thing, without regard to many other things, predicable of ſnow.

" And from the laſt circumſtance, its yielding to feelings of a certain intenſity," &c. page 480. from the top.

This remark deſerves peculiar attention; for, to the beſt of my judgement, it is the only one of the great number contained in the ſixteen paragraphs of objections to my Eſſay, that is ſtrictly fair, and pertinent to my mode of reaſoning. It plainly turns on *things*, as all reaſonings ſhould do, and not on words; and it ſhews, that the author of it underſtood the nature and force of my argument. But I cannot think it a valid objection to the reaſoning in my Eſſay; and I think it may be fairly and completely anſwered in the following manner.

Firſt, I admit, that men do *ſometimes* perform very fooliſh actions in conſequence of the ſimultaneous application of two or more motives in oppoſition, combination, or concurrence; and I conceive

that this may proceed in ſome caſes from the abſolute violence of the motives ſo applied, which may diſorder both the intellectual and the active powers of a perſon; but more commonly from the relative want of due force of mind, that is, from weakneſs or deficiency of the ſelf-governing power, which is various in different perſons, and in the ſame perſon at different times. Thus a child, from a deſire to ſit on two ſtools, will endeavour to ſit on them both at once: but the danger thence reſulting to the ſitting part is ſo great and immediate, and the conſequences of ſuch an attempt have ſo often been experienced, that the caſe is become proverbial. And the childiſh conduct in this caſe, and the vulgar proverb founded on it, afford more real uſeful practical knowledge of the human mind, and of the relation of motive and action, than could be extracted from many volumes written to prove the neceſſity of human actions. The child learns that he has the power of chooſing, and that he ought to chooſe, in ſuch caſes; and as he grows up, is reminded by the proverb, that in many other caſes it behoves

behoves him much to chooſe between different motives. Yet many people, either from natural defects, or acquired habits of indeciſion from want of proper exertion of their faculties, have all their lives been remarkably wavering and irreſolute, unable or unwilling to chooſe or determine where they ought to have done it, and where ordinary men would have done it, at once. This character has attracted the attention of men of obſervation and wit: it has been ſucceſsfully exhibited on the ſtage; as in the French comedy of *L'Irreſolu.* I have heard of a ſtateſman, diſtinguiſhed for this peculiarity of character, who moſt imprudently built himſelf a handſome library, with two doors to it: a brother ſtateſman, who knew his infirmity, expreſſed great concern at finding him in ſo perilous a ſituation; apprehending he would never get out of his library, from not being able to determine which door he ſhould go out at.

But we muſt not expect in *all* caſes in which there is a combination of inconſiſtent motives, without the poſſeſſion or the

the proper exertion of the ſelf-governing power, that there will of *neceſſity* be an abſurd or ridiculous combination in the reſult or overt action, of the *ſame kind* with that which I have ſhewn to be the neceſſary conſequence of the *conſtant conjunction* of motive and action; and which I have illuſtrated ſo fully. For the relation of motive and action is in fact but an *occaſional and ſeparable conjunction;* and, conſiſtently with this notion of the relation in queſtion, the influence of only one of the motives applied *may* be perceptible in the reſult; or firſt that of one, then that of another, then that of a third of them; and this not once only, but repeatedly, and as it were by turns. Hence that peculiar modification of indeciſion and weakneſs of mind which is called *wavering*, and is conſiderably different from mere *heſitation*, or want of chooſing or determining. It is the frequently determining, but often changing the determination; and chooſing, and for ſome time acting, according to different motives in ſucceſſion, though they were all applied

at

at once. The bad conſequences of this wavering conduct on numberleſs occaſions, eſpecially in all very important caſes, and in all caſes of great and urgent danger, are as well known as thoſe of abſolute indeciſion; and I believe in fact, that they have been more frequently obſerved. As theſe two kinds of weakneſs are ſo near akin, it is highly probable that both may often have been combined in the ſame perſon, and may even have been ſhewn in the courſe of the ſame tranſaction, eſpecially if it were long or complicated.——Both kinds of weakneſs are equally inconſiſtent with the character of a *great man*; for example, of a great general, or a great ſtateſman; as many armies, and many nations, have learned by ſevere experience. Many perſons, by the various accidents of birth and fortune, have been placed in ſituations, in which, for want of proper ſteadineſs or vigour of mind, they could not act either with honour to themſelves or advantage to thoſe whoſe moſt important intereſts depended on their conduct.

JAMES,

JAMES, the Firſt of England, and Sixth of Scotland, who was no way deficient in ſenſe, or knowledge, or wit, ſeems to have been remarkably deficient in the no leſs important talent of ſteadineſs or vigour of mind. It is ſaid he knew well enough his own defect; and that he was once told of it in a very curious manner from the pulpit. He had heard of a famous preacher, who, according to the faſhion of the times, was very witty in his ſermons, and peculiarly happy in his choice of texts. JAMES got this perſon to preach before him; who, with all ſuitable gravity, gave out his text in the following words: "*James*, Firſt, and Sixth: the latter part of the verſe. "He that wavereth is like a wave of the "ſea, driven by the winds, and toſſed." "He is at me already," ſaid the King. The text is genuine, and the application of it juſt and witty, even independently of the pun, which ſeems ſo well ſuited to the taſte of the times, and eſpecially of JAMES and his Court. I know not whether the ſtory be true or invented; but, at any rate, the ſtory, and the ſimple text, afford

afford a good illuſtration of what I am here endeavouring to point out.

What I have here mentioned ſo fully with reſpect to the caſe of motives of only ordinary force, in perſons in whom there is a want of due vigour of mind, is equally applicable to the caſe of motives of ſuch extraordinary violence, that ordinary people cannot reſiſt them; and may be ſufficient to ſhew, that ſuch a combination of influence in the reſult as is alluded to in N° 13. *will not neceſſarily* take place in ſuch circumſtances. For ſuch motives being either permanently and completely or for a time ſeparable from their reſpective actions, the reſult *may* correſpond entirely to one or more of the motives, juſt as if there had been no others applied; or it *may* correſpond to every one and all of them ſucceſſively, or by turns. When I mention this as what *may* be the reſult in theſe caſes, in contradiſtinction to what *muſt* be the reſult on the ſuppoſition of conſtant conjunction, I mean only to exclude the notion of its being in any meaſure voluntary, or depending on the ſelf-

governing power of the perſon to whom the motives are applied; which is excluded in the caſe ſtated in N° 13.: but I do not mean to ſay, that it may come to paſs abſolutely by chance, or without any cauſe whatever; for ſuch a ſuppoſition is abſurd. We are only to conceive, that the varieties in the reſult will depend on cauſes or circumſtances in the application of the different motives, and in the ſtate of the perſon to whom they are applied, eſpecially in the involuntary train of thought, which may be unknown to us, or, if known to us, will not be in our power. In conſequence of ſuch circumſtances, the perſon's attention *may* be firſt and excluſively given to one or two of the motives applied, or firſt to ſome, and then to others of them; ſo that the influence of them, ſuppoſing them to have overcome the force of mind, ſhall not have neceſſarily nor conſtantly, whatever may be the caſe on ſome occaſions, that abſurd reſult which the author of the remarks alludes to.

But it is needleſs to diſcuſs more minutely

nutely this point of the ſeparability of motive and action, as preventing, not the poſſibility, but the neceſſity and univerſality, of ſuch a reſult; for there is a ſtill greater difference between the real juſt notion of the relation of motive and action, and that notion of it which I have conſidered ſo fully, and ſhewn to be erroneous; in conſequence of which ſuch a reſult as the author of the remark alludes to, (for example, motion in the diagonal caſe, p. 226. and inſtances, p. 260. 263.) cannot be a neceſſary conſequence of any poſſible or ſuppoſeable application of motives.

The natural and juſt notion of motive implies in *ordinary* caſes reference to the ſelf-governing power of the agent; but in all caſes, even thoſe of compulſion, it implies the ſeparability of motive from its proper action; and it always implies, and chiefly conſiſts in, the notion of "that for the ſake of which;" which effectually excludes ſuch reſults as are at preſent in queſtion from being *neceſſary*

conſequences of the application of any motives.

For the reaſons ſtated p. 465. l. 20. I avoided entering on any minute diſcuſſion of the nature, extent, and limits of the ſelf-governing power; nor can I here undertake to expreſs, in a manner free from cavil, the peculiar ſtate, and all the circumſtances, of a perſon under compulſion, from the application of motives of irreſiſtible force. But I may venture to ſay, that a perſon in ſuch circumſtances is not conceived to be deprived of his underſtanding, or driven to madneſs: he is ſuppoſed to underſtand what he is to do, and to know whether he can or can not attain or accompliſh, by any mode of acting, "that for the ſake of which." I may ſay likewiſe, that what is uſually called and reckoned the irreſiſtible force of a motive, is but a relative notion: it is indeed doubly relative, as bearing relation both to the mind to which the motive is applied, and to the other motives applied along with it, but in oppoſition to it.

I know of no kind or force of motives that, ſtrictly ſpeaking, can be thought abſolute, and univerſally irreſiſtible: I know of nothing that could have ſubdued *atrocem animum* CATONIS. But we conceive, that he was endowed with very extraordinary force of mind; and an ordinary perſon, who ſhould take it into his head that he was equal in this reſpect to *Cato*, would be as much and as deſervedly laughed at, as if he ſhould fancy that his own limbs were equal to the *invicti membra Glyconis*, or as if he thought his own talents were equal to thoſe of *Homer* or of *Archimedes*. But the inferiority of ordinary men to *Cato*, and others of heroic virtue, is not ſolely, nor perhaps chiefly, in point of underſtanding: the knowledge of what is right, and the ability to do it in very trying circumſtances, are quite different things; the former of which is much more common than the latter, and may reaſonably be ſuppoſed in all who approve the conduct and admire the character of *Cato*, though probably but few of them *could* have done as he did, or been, what they behold with admiration; and

and this, not from folly, nor from ignorance, nor from vice; but merely from weakneſs.

Though the differences among mankind with reſpect to natural or to acquired vigour of mind, and conſequently with reſpect to the kind and the intenſity of motives which they cannot reſiſt, be very great; yet there is generally underſtood to be a ſort of common ſtandard or average among them as to theſe things, juſt as there is with reſpect to all other mental endowments, or with reſpect to various bodily qualifications, ſuch as ſtature, and muſcular ſtrength. All excuſes or juſtifications of a perſon's conduct on the ſcore of conſtraint, compulſion, or ſtrong and irreſiſtible temptation, and all our judgements when we acquit or condemn in ſuch caſes, and all our ſentiments of admiration of thoſe who have diſplayed on trying occaſions heroic virtue, and extraordinary vigour of mind, and our contempt of thoſe who on ordinary occaſions have acted meanly, though perhaps not criminally, and have thereby ſhewn peculiar weakneſs

weakneſs of mind, plainly bear relation to that notion, however vague and inaccurate it may be thought, of the *common* degree of force of mind.

I doubt much whether any great accuracy in eſtimating the force of mind of different individuals be attainable; and, at any rate, I do not aim at it here. But I preſume it will be a ſufficient illuſtration of my meaning, and, in general, a pretty juſt account of the matter, to ſay, that we conceive that even ordinary men *may*, if they pleaſe, reſiſt the allurements of intereſt or of pleaſure, of various kinds; or what we call temptation: but that ordinary men *cannot* reſiſt ſuch motives as the fear of death and violent pain. In other words, we conceive, that the latter motives do overpower, but that the former do not overpower the common degree of force of mind.

It is certain, at leaſt, that the latter motives, and not the former, have in all ages and countries been employed as almoſt ſure means of compulſion; that they have generally

generally been found effectual; that we conſider a perſon as ſomehow extraordinary who has reſiſted them to the laſt; that we conſider the application of them as excuſing actions in their own nature improper, and, if they had been voluntary, highly criminal; that, on the other hand, mere temptation is not thought an excuſe, nor conſequently, in general, pleaded as one, for ſuch improper actions; and that perſons yielding to temptation, and doing wrong in conſequence of it, are reckoned not merely weak, but criminal. It was thought, as in truth it was, a very extraordinary excuſe for the peculation that he and his friends were charged with, that a man of no common talents, and very uncommon vigour of mind, made openly in the Britiſh ſenate, "That there were ſuch temptations in India as fleſh and blood could not reſiſt." There was certainly ſomething bold at leaſt, if not honeſt, in ſuch an avowal; but I am convinced no perſon of common ſenſe and common honeſty could ever hear or think of ſuch an excuſe without indignation.

But

But leaving, for the preſent, the examination of ſuch caſes of ſuppoſed irreſiſtible temptation, as doubtful at beſt, we may conſider the motives generally acknowledged as ſufficient to overcome the ordinary degree of force of mind; and it will ſoon appear, that even their ſuppoſed irreſiſtible influence is not uniform in the ſame perſon, nor conſtantly conjoined with its proper action; that it depends in a great meaſure on the kind and degree of the other motives applied along with it, but in oppoſition to it; that the influence of ſuch motives may ſerve to *ſupport*, and concur with, the force of mind, which, though *overcome*, is not to be regarded as *annihilated*, even in caſes of compulſion.

The fear of death may be ſuppoſed, or may have been found on trial, ſufficient to overcome an ordinary perſon, and make him do what he was very unwilling to do, and would not have done but for that fear; as in the common caſe of a traveller being robbed on the highway. This muſt be acknowledged to be a fair in-

ſtance of compulſion, and as ſuch would be a ſufficient excuſe for the traveller, if, to ſave his own life, he gave up the money of another perſon entruſted to him, and which he could not replace. If he were to do this from mere *temptation*, that is, for his own intereſt or pleaſure, he would be criminal; at leaſt he would be thought ſo on this ſide of the Indus. But it would not follow, that the ſame perſon, either at that or any other time, would neceſſarily yield to the ſame motive, and to ſave his life do any other action required of him, however mean or criminal it might be; nor that he would, for the ſame conſideration, ſuffer any evil that could be inflicted on him, as, for example, the extremity of torture. In the caſe of torture applied to obtain from a wretch the confeſſion of a crime for which, as ſoon as he confeſſes it, he muſt ſuffer death, we have in direct oppoſition two *ſuppoſed* irreſiſtible motives, each of which, if it had been applied without the other, would probably have overcome the force of mind of the perſon. But when both are applied at once, the perſon completely reſiſts the one,

one, and acts perfectly according to the other. This ſeparability of even the moſt powerful, and ſuppoſed irreſiſtible, motives from their actions, prevents the *neceſſity* of ſuch abſurd combinations as thoſe alluded to in N° 13. If any perſon think this may be accounted for merely on the ſuppoſition of abſolute force in the motives, without any force of mind in the perſon, let him conſider again the neceſſary conſequences of his ſuppoſition, as ſtated in the dilemma and the axioms, and he will find his miſtake.

Without ſuch ſeparability of motive and action, ſelf-governing power or force of mind being excluded from having any ſhare in the actions of men, the abſurd combinations of influence *muſt* take place; but motive and action being ſeparable, and the notion of "that for the ſake of which" being eſſential to the relation of motive and action, we cannot expect a combination of action that is not in that relation to all the motives from which it proceeds, whatever be the force of the ſeveral motives applied; not even though

ſingly applied they would have been irreſiſtible.

Thus, in the caſe p. 226. diagram 1. if the porter, inſtead of being offered a guinea for going in the line A B, were aſſured, that he ſhould be hanged if he did not go in that line, I take it for granted he *would* go accordingly: and for a ſimilar conſideration ſingly applied, he *would* go in the line A C. But if both threats were applied at once, he *would not* go in the diagonal A D, any more than he would have gone in the diagonal for the guineas he might have got by going in the line A B, and for the half-guineas he might have got by going in the line A C; for this plain and ſatisfactory reaſon, that he could neither earn guineas nor half-guinias, nor eſcape hanging, in the different caſes put, by ſuch conduct: his action would not be in the relation of "that for the ſake of which" to the motives applied. I call this reaſon plain and ſatisfactory in the caſe at preſent under conſideration, becauſe it is conſiſtent with, and directly procceds from, the principle (the juſt notion

tion of the relation of motive and action) from which I reaſon, and perfectly accounts for the reſult; which, though never yet experienced, is uniformly and eaſily foreſeen. The ſame reaſon is frivolous and abſurd, when offered to account for the reſult *not* correſponding to the *neceſſary* inference from the principle of conſtant conjunction, becauſe it is inconſiſtent with this principle, and *cannot* account for the neceſſary inference from it being falſe, if the principle itſelf be true; which therefore muſt be given up.——It can ſcarce be neceſſary to mention, that if motives that are ſuppoſed to overcome the force of mind be applied to a perſon, ſo that a combined action reſulting from both may ſtand in the relation of "that for the ſake of which" to both, ſuch a combined action (which in this caſe will not be abſurd, but, on the contrary, very wiſe) may reaſonably be expected to take place; as, for example, in the caſe ſtated p. 238. 239.; if the fear of hanging, inſtead of the deſire of earning money, were the porter's motive for going ſouthward, and alſo for going weſtward, I have no doubt but

but he would go in ſome direction intermediate between the two, as being the only way by which he could eſcape hanging, or attain " that for the ſake of which" with reſpect to both motives.

N° 14.

" I have no occaſion, in theſe remarks, " to concern myſelf with the fact, which " poſſibly may prove to be important, and " which I think the Eſſay eſtabliſhes, that " the relation between cauſe and effect is " different from that between motive and " action."

When the author of the remarks wrote this ſentence, he muſt certainly have forgotten both the *kind* of the difference between the two relations in queſtion, and the very particular *manner* in which it was diſcovered and *demonſtrated*. That difference, which he acknowledges that the Eſſay eſtabliſhes, has been aſcertained by tracing the ſtrictly *neceſſary* conſequences of the fundamental principle of the doctrine

trine of Neceſſity, namely, the perfect *inertia* of the ſubject, and the abſolute irreſiſtible force of the ſuppoſed *cauſes* applied to it: theſe *neceſſary* conſequences have been found true as matters of fact with reſpect to phyſical cauſes and effects in lifeleſs bodies, but falſe, and abſurd, and ridiculous, with reſpect to the motives and actions of living perſons.——The ultimate *neceſſary* inference from this appears ſo plain and obvious, that I could never have ſuppoſed it a matter of doubt or diſpute; and its being made ſo now appears to me a very ſtriking and a very inſtructive phænomenon in the operations of the human mind. But it is one that had not eſcaped the obſervation of BACON; and therefore *reſpondebit pro me Ariſtoteles* MEUS.

Idola et notiones falſæ, quæ intellectum humanum jam occuparunt, atque in eo alte hærent, non ſolum mentes hominum ita obſident, ut veritati aditus difficilis pateat; ſed etiam dato et conceſſo aditu, illa rurſus in ipſa inſtauratione ſcientiarum occurrent, et moleſta erunt;

erunt; niſi homines præmoniti, adverſus ea ſe, quantum fieri poteſt, muniant.

NOV. ORG. I. 38.

As a good illuſtration of this important general obſervation, and as a real caſe, very exactly parallel to that of the author of the remarks, who acknowledges the difference that I have eſtabliſhed in my Eſſay, but does not acknowledge, nor perhaps perceive, what is neceſſarily implied in it, I ſhall mention a ſtory which I remember to have heard more than twenty years ago.

One of the men who had been round the world with *Commodore Byron*, ſoon after his return to England, went to his native place, where he was conſidered as a very extraordinary perſonage, and was invited to a club of his townſmen, who expected to be greatly edified by his converſation. It was plain, that a man who had been round the world muſt know more of it than any other body. But the circumnavigator could give them but very little information with reſpect to what he had

ſeen

ſeen in his voyage; and ſeemed to have very little to ſay for himſelf, till ſome of the club began to queſtion him about the world being round: then he opened with a tone of authority, "As to that, I'll tell "you what it is; they ſay the world is "round; but I have been all round it, "and, by God, it is as flat as this table." —Yet this honeſt Tar was not forſworn; but I think his beſt friends muſt admit, that he was not very expert at drawing inferences from premiſes, or perceiving neceſſary conſequences; ſince, after knowing, and ſeeing, and doing what was impoſſible unleſs the world were round, he could not diſcover that it was ſo.

"It is ſufficient for my argument, if a "relation ſubſiſts between what is involuntary in the train of thought in the "mind, and the acts of the will, as conſtant and certain as that of cauſe and "effect."

This is one of the remarks that I cannot fully underſtand: it appears to me both vague and obſcure; nor can I ſay

with certainty to what things and what relation the author alludes: but I gueſs, that by "what is involuntary" may be meant *judgement*; and by "acts of the will," voluntary determinations, or chooſings, and overt actions. If ſo, the anſwer to it has been given too fully already, (p. 551. to 575.), and muſt not be repeated here.

N° 15.

The firſt part of this paragraph is, I believe, a juſt account of the origin of the notion of power, not only in the author of the remarks, but in all mankind. The laſt part of it is another inſtance, like many that have been already conſidered, of the confuſion, and perplexity, and obſcurity, and error, that are almoſt inevitably produced in ſuch reaſonings as this, by the needleſs and careleſs uſe of metaphorical expreſſions.——The power or faculty of making efforts, is an attribute of a living perſon; the making efforts is the exertion of ſuch a power or faculty, by the perſon: the

the perſon has likewiſe underſtanding, that is, he underſtands what he is about; and the term *Underſtanding* expreſſes merely the abſtract notion of this other attribute; which can neither direct the efforts made, nor the faculty that makes them; nor can it examine any thing, nor form any opinion, nor conſequently can it be under the neceſſity of examining any thing, or of forming any opinion: but the *perſon* may, if he pleaſes, examine a great many things, though he is not under the neceſſity of doing ſo; and if he do examine things fairly, his opinion or judgement will be involuntary; and ſo far is he, and his efforts, and his faculty of making them, from being under the direction of his underſtanding, (even admitting the metaphor), that it is rather his underſtanding that is in a great meaſure under his direction; for he can attend, or not attend, as he chooſes, to thoſe things which he might underſtand, and which, if he did attend to them, and conſequently did underſtand them, he would involuntarily judge of one way, and not another. When the perſon has attended, and

underſtood, and judged involuntarily, he may make efforts, or act voluntarily, either according to, or in oppoſition to, his involuntary judgement; as in the caſe of *Medea*.——If things had been as they are ſtated in the latter part of N° 15. I do not think we could ever, from the conſciouſneſs of ſuch efforts, have acquired the notion of power; any more than we could from what happens with reſpect to belief.

N° 16. *Sentence Firſt.*

Having already, in the courſe of my Eſſay, expreſſed very fully my opinion with reſpect to the profeſſion of belief of the doctrine of Neceſſity, eſpecially in thoſe who aſſert it, and yet perceive intuitively the falſity of many neceſſary conſequences that I have deduced from it, and who deny theſe inferences, and hold faſt the principle, without ſhewing any error in my reaſoning, it is evidently impoſſible for me to make any exceptions in favour of any individual. The caſe of the author

thor of the remarks, with reſpect to "*remaining unconvinced*," is not altogether ſingular: I have met with the ſame in ſeveral other perſons. It may eaſily be accounted for: they have no occaſion to be convinced of any error in their *opinion*, or to alter their belief; which, from their own actual conduct, as well as from what they have always obſerved, and ſeem always to have expected in other men, and above all from their perceiving intuitively what neceſſary conſequences from the principle of neceſſity will be found experimentally falſe, and what may be true, appears clearly to have been the ſame with that of ordinary men who aſſert and believe the liberty of human actions. Their ſituation is nearly the ſame with what would be the ſituation of a ſet of philoſophers, who having met with the pretended demonſtration, that *Achilles*, though ſwift of foot, could never overtake an old man, who went but half as faſt, and was but a mile before him; and who, being unable to detect the ſophiſm, had acquieſced in it, and profeſſed to believe it; but ſaw at once, when the caſe was fairly ſtated to them

them in proper and accurate terms, that when *Achilles* had gone two miles, he would be juſt up with the old man; and that when he had gone four miles, he would be a mile before him. Surely theſe philoſophers would have no occaſion to be convinced, or to change their opinion.

There is, however, one peculiarity in the ſituation of the author of the remarks which ought to be conſidered; I mean, his having ſo much confidence in his own objections as to allow them to be publiſhed; which many other perſons, "remaining unconvinced," like him, would not do with reſpect to theirs. Even this peculiarity may eaſily be accounted for: his objections themſelves afford a full explanation of it. They are expreſſed in vague, obſcure, ambiguous, and metaphorical terms, to which he ſeems to have a peculiar attachment, as he employs them voluntarily, or at leaſt without any apparent neceſſity. Such ambiguous and metaphorical expreſſions confound and fruſtrate the beſt reaſoning, and make the worſt appear as plauſible as the beſt: but as the uſe of them

them is voluntary, it is beyond the province of demonſtration.

For the purpoſes of good reaſoning with one another, it is abſolutely neceſſary that men ſhould employ words, or ſymbols, that expreſs accurately and diſtinctly the ſeveral thoughts or notions which they have occaſion to compare together, and to reaſon about. Nay, though it may appear a paradox, I believe it to be an important truth, that *moſt* men need accurate and diſtinct words to enable them even to *think* accurately on certain ſubjects; for *moſt* men are accuſtomed to *think* and to reaſon by themſelves, in ſome meaſure, by the help of words. If the words ſo employed be inadequate for their purpoſe, by being vague, ſo as to denote no thoughts with ſufficient diſtinctneſs and preciſion; or ambiguous, ſo that the ſame word ſhall occaſionally denote two or more different thoughts, the perſon uſing them may be ſo thoroughly confounded, as not only not to be able to think accurately or juſtly, but not even to be able to know what

what he thinks, nor conſequently to give any intelligible account of it.

The learned and ingenious DR CAMPBELL, in his *Philoſophy of Rhetoric*, has treated this point with his uſual acuteneſs and good ſenſe; and has clearly ſhewn, that a perſon may not only read, but deliberately write nonſenſe, without knowing or ſuſpecting it. The ſame author has very happily illuſtrated the relation between language and thought, by comparing the former to the *medium*, ſuch as water, air, or glaſs, through which the latter is to be ſeen; and to an inſtrument, ſuch as a mirror, by means of which a perſon may ſee even his own thoughts. He remarks, that the utmoſt poſſible perfection of ſuch a medium, or ſuch an inſtrument, is, that it be ſo clear that itſelf ſhall not be perceived at all, while every thing that ſhould be perceived through it ſhall be ſeen diſtinctly. He very juſtly obſerves, that the terms, *clearneſs*, *perſpicuity*, *obſcurity*, ſo commonly applied to language, denote *literally* the qualities of ſuch a medium or inſtrument;

inſtrument; and that they are uſed *metaphorically* in their more common application.

If the greateſt philoſopher in the world ſhould obſtinately perſiſt in always uſing a cylindrical mirror, he could never acquire a juſt notion of his own features, and, inſtead of his own face, would ſee always a very frightful and diſtorted image: and if he choſe to view all objects only through green ſpectacles, he could never diſtinguiſh properly their ſeveral colours, nor ever know the full and varied beauty of the fair face of nature. If he were to maintain, that what he ſaw of his own face, and of other objects, was the real conſtitution of them, and that the common notions of them were falſe, his conduct would juſtly be reckoned uncandid, as well as extravagant. It would be reaſonable and friendly to admoniſh him, that he was uſing very prepoſterous inſtruments, and to furniſh him with better; but if he would not condeſcend to make uſe of theſe, he muſt be allowed to pleaſe himſelf; for it would be too violent

a meaſure to break a philoſopher's mirror, becauſe it was cylindrical; or to take his ſpectacles from off his noſe, becauſe they were green.——The ſame reaſonable admonition may be given, and the ſame friendly offer may be made, to the philoſopher who uſes, in his reaſonings, ambiguous and metaphorical expreſſions, which diſcolour, and diſtort, and confound, every thought which ſhould be ſeen through them: but if he will not regard the admonition, nor accept of the offer, he muſt be left to himſelf.

N° 16. *Sentence Second.*

" I confeſs alſo, it ſeems to be very " clear, that if the acts * of the will are " not determined by the judgements of " the underſtanding, but by a ſelf-go- " verning power, which *may* act, and, if " I recollect right, is ſuppoſed to often " act without motives, and in oppoſition " to all motives, the human race, inſtead

* More metaphors: *Tranſeant cum cæteris.*

" of

" of being moral agents, would ſome-
" times at leaſt be more diſorderly than
" any madmen; their manners could be
" regulated with any degree of certainty
" by no laws; the preſcience of God Al-
" mighty could not trace their actions;
" and even his omnipotence, unleſs he al-
" tered their nature, could do nothing
" more for them than make a vaſt bedlam
" to contain them."

Theſe things, which ſeem ſo clear to the author of the remarks, are incomparably witty, and ſufficiently wonderful: a very rigorous critic would perhaps require a little proof of ſome of them, as thinking they were of that kind which POPE has very happily termed,

—— " *Demonſtration thin, and Theſes thick,*
" *And Major, Minor, and Concluſion quick.*"

But as I am no Theologian, and am neither inclined nor qualified to reaſon about preſcience and predeſtination, I think it more prudent, and I am ſure it is much more eaſy, to let them all paſs as ſtrictly

neceſſary conſequences of the principle to which they are referred; and to content myſelf with ſhewing what relation that principle bears to the doctrine maintained in my Eſſay. This relation is indeed a very remarkable one.

The principle in queſtion is, *That a ſelf-governing power* (which here certainly means an agent, or perſon having ſelf-governing power) *may act, and is ſuppoſed to often act,* WITHOUT *motives, and in oppoſition to* ALL *motives.* Now, it happens that this principle, which is imputed to me, is very widely different from what I have maintained; ſo widely different, indeed, that the greater part of it is juſt what I have formally and repeatedly diſclaimed in the ſtrongeſt terms, as being not merely erroneous, but ſo notoriouſly falſe and extravagant, that there would be good reaſon to call in queſtion the veracity, as well as the underſtanding, of any perſon who ſhould venture to aſſert it. *Videſis* p. 2. 3. 4. 5. 6. 62. 63. 64.

From the very title of my Eſſay,—on the

the difference between the relation of motive and action and that of cauſe and effect in phyſics, it muſt be evident, that it could never have been my intention to reaſon about actions without motives, but only about actions for which there were acknowledged or well-known motives; ſo that I might aſcertain the difference between this relation and that with which I undertook to compare it. From the plan of my reaſoning,—on phyſical and mathematical principles, without making any appeal to conſciouſneſs, (to which plan, I preſume, it will be admitted that I have ſtrictly adhered), it muſt have been impoſſible for me to have included in my argument any caſes or inſtances, real or ſuppoſed, of actions without motives; becauſe this circumſtance, the want of a motive for any action performed, could be known only by conſciouſneſs, and never could be aſcertained, either by open experiment, or by mathematical reaſoning. From all the inſtances that, in the courſe of my argument, I have given of actions variouſly related to motives, it muſt appear, that I never meant to treat of actions

tions performed without any motives; for no ſuch inſtance is given by me as part of my reaſoning; but many of motives applied, to which there were no correſponding actions. From the manner in which I have ſtated the propoſition (p. 171.) which I undertook to demonſtrate, it muſt be evident how far I meant to go; and that I did not undertake to prove, that perſons often acted *without* motives, and in oppoſition to *all* motives.

Any attentive reader and good reaſoner, who ſhall compare that propoſition (p. 171.) with the doctrine imputed to me in the ſentence of N° 16. at preſent under conſideration, will be ſtruck with the great change of meaning made in my propoſition, by ſubſtituting the word ALL for the word ANY; which indeed is ſo great as to convert my propoſition into one which I not only never thought of maintaining, but had formally diſclaimed. The difference of meaning between the two adjectives in queſtion is, I preſume, ſo obvious, that it muſt be well

and

and uniformly underſtood: if it were not, the preſent caſe would be a good illuſtration of it. And this difference is rendered the more ſtriking by ſubſtituting the phraſe, *is ſuppoſed to often act*, for my phraſe, of very different import, *may act*.

The infinite difference between the propoſition which I undertook to demonſtrate and the aſſertion imputed to me by the author of the remarks in N° 16. will appear plainly from the mere ſpecification of each of them by a ſingle example. Let any number of motives, ſuch as duty, intereſt, pleaſure, honour, fear, hunger, &c. be ſuppoſed to be applied at the ſame time to a perſon, in ſuch a manner that ſome of them ſhall be in oppoſition to one another, others in direct concurrence or in combination with one another; *I hold*, that the perſon, in ordinary caſes, (that is, ſetting aſide compulſion), *may act* according to *any* one of thoſe motives, or according to *any* two or more of them in concurrence or in combination, and of courſe contrary to *any* motive, either ſingle,

ſingle, or concurring with or combined with others, in oppoſition to thoſe according to which the perſon acts. But in N° 16. I am repreſented as maintaining, that perſons *often acted, without* a motive, in oppoſition to *all* the motives ſo applied. The imputed propoſition is ſo extravagantly falſe, that it can deſerve no conſideration. My own appears to me a plain and familiar truth, of which we have experience every day; at leaſt I know of no motive according to which men have not ſometimes acted; nor of any that has not on ſome occaſions been applied without being followed by correſponding action, in a manner equally inconſiſtent with the ſuppoſition of mere chance, and with that of abſolute irreſiſtible influence or force in the motives. But as it has been denied by ſome philoſophers, I was at pains to examine it rigorouſly, and to ſhew, by ſtrict reaſoning, and by open experiment, if required, that ſuch was the caſe.

I was perfectly aware of the uſual miſtake, or miſrepreſentation, of the popular notion of liberty; not merely by habitual wranglers

wranglers in common converſation, but by ſome of the moſt diſtinguiſhed writers on this ſubject, ſuch as LEIBNITZ, HUME, and PRIESTLY; and having occaſion to quote a paſſage from MR HUME's Eſſay, and to refer to one in DR PRIESTLY's, in which, by the ſtrongeſt inſinuation, that extravagant doctrine is unjuſtly imputed to thoſe who aſſert the liberty of human actions, I took that opportunity to diſclaim it in the ſtrongeſt terms.

Even with reſpect to the notion and belief that a perſon *may act* without a motive, which I had occaſion to mention more than once in the courſe of my Eſſay, (p. 56. 57. 58. 59.; 388. 389. 390. 391.; 424. 425. 426. 427. 428. 429. 430. 431.), I was at pains to declare fully and explicitly, that I did *not* aſſert nor undertake to prove it, but left it entire for future conſideration, if it ſhould be thought to deſerve any. The diſcuſſion of it did not appear to me eſſential to what I undertook to prove with reſpect to the relation of motive and action, and the difference between it and that of cauſe and effect in

phyſics: I ſaw no means of conducting it without any appeal to conſciouſneſs, and purely on phyſical and mathematical principles, or ſtrict reaſoning by neceſſary conſequences, and open experiment; and I therefore avoided it ſo carefully in all my reaſonings, that a candid and attentive reader will find nothing in my argument inconſiſtent with the perſuaſion, that a perſon would inſtantly fall aſleep, or die, if there were no motives applied to him; ſo as to be effectually prevented from acting without motives.

After all theſe precautions, continued uniformly from the beginning to the end of my Eſſay, I could not have ſuppoſed it poſſible that any perſon, from any imperfection of memory, could have ſo far miſtaken my meaning, as to impute to me the doctrine ſtated in the ſecond ſentence of N° 16.; nor could I have ſuppoſed it poſſible that any perſon who diſtruſted a little the accuracy of his memory with reſpect to that point, (which, from the hypothetical clauſe, "If I recollect right," appears plainly to have been the caſe with the

the author of the remarks), ſhould yet have relied ſo much on his memory, as to impute to me the abſurd opinion which I had diſclaimed, and to proceed to draw inferences from it, without looking into my Eſſay; the ſlighteſt inſpection of which would have ſet him right, and prevented him from ſo ſtrangely attempting to put me in the wrong: and if I had ſuppoſed theſe things poſſible, and very likely to happen, I could have done no more than I did to prevent them.

The ſtrange inferences in N° 16. deduced from my *ſuppoſed* doctrine, ſeem intended as an imitation and a ſort of counterpart of thoſe which I have given (p. 257. *et ſeqq.*) as neceſſary conſequences of the doctrine of the conſtant conjunction of motive and action, and which many men of candour, and good ſenſe, and good taſte, may think too ludicrous for a ſerious philoſophical inveſtigation. Without preſuming abſolutely to juſtify thoſe ludicrous inferences, I ſhall only mention as ſome excuſe for them, that they are given in illuſtration of certain general inferen-

ces, previouſly demonſtrated as neceſſary conſequences of the principle of conſtant conjunction, from which I was reaſoning *ad falſum et abſurdum.* That principle had been moſt confidently aſſerted by a great philoſopher, whoſe very words I had quoted; and, at any rate, though it never had been aſſerted, it would have been fair and rational to have ſtated it, and to have reaſoned from it by neceſſary conſequences, as being one of the alternatives of an undeniable dilemma. The notions on which the reaſoning depended (X ⌐ Y ≡ A ⌐ B, &c.) were ſo new and ſo abſtruſe, that it was neceſſary to illuſtrate them fully. The caſe of going in the diagonal, or in one of the ſides of a parallelogram, though abundantly diſtinct, and in one reſpect complete and deciſive, was too remote from the general conduct of human life to afford that clear and forcible illuſtration which was wanted: therefore inſtances were to be taken from the occurrences in real life; and they appear ludicrous. But this is no fault of mine, but a well-known principle of human nature, and I believe a very uſeful one. Any thing

thing repugnant to a mathematical axiom is calmly perceived to be abſurd and impoſſible; but any thing ſtrikingly repugnant to the familiar principles of human nature, even though it be poſſible, appears to us not only abſurd, but ridiculous. It is a matter of taſte, to like or diſlike ſuch ludicrous illuſtrations; but their being ludicrous cannot weaken the force of them: *Ridentem dicere verum quid vetat?* If indeed they had been given without the previous demonſtration, they would have been worſe than the ravings of any ordinary madman.

Theſe things I ſuſpect the author of the remarks had not duly conſidered, when he ſet about drawing inferences from an extravagant principle, erroneouſly at leaſt, if not unjuſtly imputed to me, who had diſclaimed it, and very different from the common opinion of mankind.

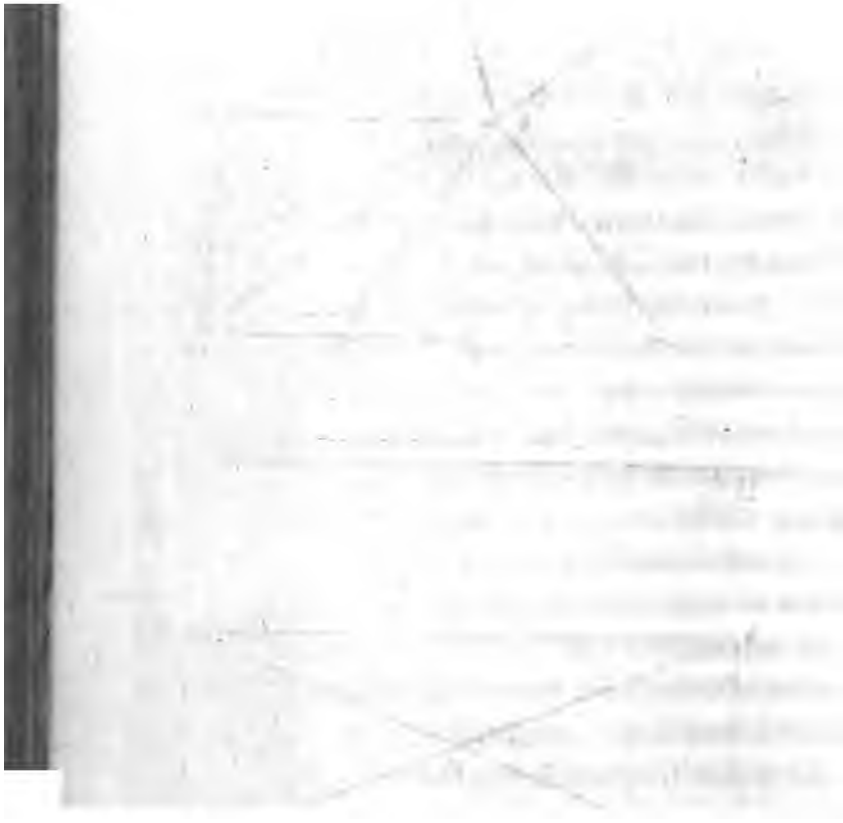
I muſt differ from him even with reſpect to the very modeſt opinion that he expreſſes in the laſt ſentence of N° 16. "I do not aſſert that theſe (extravagant and ludicrous)

ludicrous) conſequences, even tho' proved to be juſt, can impeach the validity of a demonſtration." This, I think, is too modeſt. A demonſtration *ad abſurdum* is juſt as valid as one that is direct; and therefore, if by neceſſary conſequences a falſe or abſurd inference can be deduced from any principle, however demonſtrated, that principle, and its ſuppoſed demonſtration, muſt *ipſo facto* ſtand impeached; and unleſs ſome error can be diſcovered, either in the firſt demonſtration of it, or in the deduction of neceſſary conſequences from it, it *muſt* remain impeached to all eternity. There is certainly no power in the Britiſh legiſlature, nor even in the National Aſſembly of France, ſo far as I have yet learned, that can put an end to ſuch an impeachment. To ſpeak without metaphor, ſuch an oppoſition of demonſtrations, if it could take place, would produce abſolute ſcepticiſm with reſpect to the point in queſtion; and would even tend to ſhake our faith in demonſtration in general: but of this I have no fear.

As to the preſent inſtance, ſuppoſing the

the ludicrous inferences in N° 16. to be ſtrictly neceſſary conſequences of the principle, that men may act, and often act, *without* motives, and in oppoſition to *all* motives, it would not in the leaſt affect *my* demonſtration, foraſmuch as I never aſſerted ſuch a principle.

If the author of the remarks ſhall contrive to deduce any ſuch falſe or abſurd concluſions from *my* doctrine, I ſhall be very glad to ſee them, and ſhall pay due attention to them. I need not tell him now, for I told him more than a year and a half ago, in a written ſpecimen (and it was not a ſhort one) of the anſwers that might be given to his objections, that it was a matter of great nicety and difficulty to draw neceſſary inferences with reſpect to the actions of men, from the principle of their having ſelf-governing power. I told him, that it appeared to me, that, on the principle of *Liberty*, the *neceſſity* of any particular reſult, in any caſe, was as completely excluded, as any *liberty* with reſpect to the reſult was on the principle of *Neceſſity*. I underſtand perfectly, that in



ERRATA.

Page 261. line 13. & 14. for *Philip* read *the Milesians.*

Page 391. line 17. for *be* read *he.*

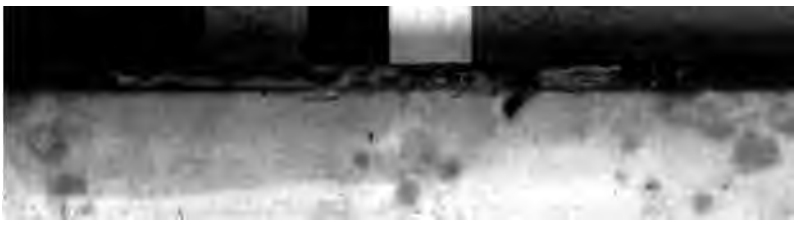
Page 437. line 4. for *three* read *four.*

line 5. for *any of the three,* read *either of the two.*

Page 448. line 2. for *men* read *a man.*

DIRECTIONS to the BOOKBINDER.

ON account of the unforeſeen length of the Introduction, and of the Appendix, to the Eſſay at preſent publiſhed, it is neceſſary to divide into Two Volumes what was originally intended for One.

The diviſion muſt be made ſo, that page 192. ſhall be the laſt of Vol. I.; and that Vol. II. ſhall begin with SECT. VIII. ſheet B b.

The Plate muſt be placed at the End of Vol. II. facing page 704.